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**STRATEGIC AND CRITICAL MATERIALS
STOCK PILING ACT REVISION**

96-1

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HEARING
BEFORE THE
SUBCOMMITTEE ON
MILITARY CONSTRUCTION AND STOCKPILES
OF THE
COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE
... **NINETY-SIXTH CONGRESS**

FIRST SESSION

ON

S. 290 ...

TO REVISE THE STRATEGIC AND CRITICAL MATERIALS
STOCK PILING ACT, TO REQUIRE THAT APPROPRIATIONS FOR
ACQUISITION OF STRATEGIC AND CRITICAL MATERIALS BE
AUTHORIZED BY LAW, TO ESTABLISH A NATIONAL DEFENSE
STOCKPILE TRANSACTION FUND, AND FOR OTHER PURPOSES

... **MARCH 19, 1979** (1)

Printed for the use of the Committee on Armed Services



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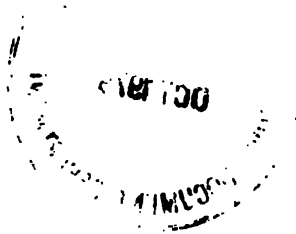
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(III)

STRATEGIC AND CRITICAL MATERIALS STOCK PILING ACT REVISION

MONDAY, MARCH 19, 1978

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON MILITARY CONSTRUCTION AND STOCKPILES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:05 a.m. in room 212, Russell Senate Office Building, Hon. Gary Hart (chairman) presiding.

Present: Senators Hart, Cannon, Thurmond, and Humphrey.

Also present: James C. Smith, Edward B. Kenney, professional staff members; John T. Ticer, chief clerk; and Jeanie Killgore, clerical assistant; David Fitzgerald, Assistant to Senator Humphrey; Frank Krebs, assistant to Senator Cannon.

OPENING STATEMENT BY SENATOR GARY HART, CHAIRMAN

Senator HART. The hearing will come to order.

This morning the Senate Armed Services Subcommittee on Military Construction and Stockpiles will hear testimony on S. 290, the so-called stockpile policy bill.

[S. 290, 96th Cong., 1st sess.]

A BILL To revise the Strategic and Critical Materials Stock Piling Act, to require that appropriations for acquisition of strategic and critical materials be authorized by law, to establish a National Defense Stockpile Transaction Fund, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Strategic and Critical Materials Stock Piling Revision Act of 1979".

SEC. 2. The Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98—98h-1) is amended to read as follows:

"SHORT TITLE

"SECTION 1. This Act may be cited as the 'Strategic and Critical Materials Stock Piling Act'.

"FINDINGS AND PURPOSE

"SEC. 2. (a) The Congress finds that the natural resources of the United States in certain strategic and critical materials are deficient or insufficiently developed to supply the military, industrial, and essential civilian needs of the United States for national defense.

"(b) It is the purpose of this Act to provide for the acquisition and retention of stocks of certain strategic and critical materials and to encourage the conservation and development of sources of such materials within the United States and thereby to decrease and to preclude, when possible, a dangerous and costly dependence by the United States upon foreign sources for supplies of such materials in times of national emergency.

"MATERIALS TO BE ACQUIRED: PRESIDENTIAL AUTHORITY AND GUIDELINES

"SEC. 3. (a) The President shall determine from time to time (1) which materials are strategic and critical materials for the purposes of this Act, and (2) the quality and quantity of each such material to be acquired for the purposes of this Act and the form in which each such material shall be acquired and stored. Such materials when acquired, together with the other materials described in section 4 of this Act, shall constitute and be collectively known as the National Defense Stockpile (hereinafter in this Act referred to as the 'stockpile').

"(b) The President shall make the determinations required to be made under subsection (a) on the basis of the following principles:

"(1) The purpose of the stockpile is to serve the interest of national defense only and is not to be used for economic or budgetary purposes.

"(2) The quantities of the materials stockpiled should be sufficient to sustain the United States during a national emergency of up to three years in duration.

"(c) The quantity of any material to be stockpiled under this Act, as determined under subsection (a), may not be revised unless the Committees on Armed Services of the Senate and House of Representatives are notified in writing of the proposed revision and the reasons for such revision at least thirty days before the effective date of such revision.

"MATERIALS CONSTITUTING THE NATIONAL DEFENSE STOCKPILE

"SEC. 4. (a) The stockpile shall consist of the following materials:

"(1) Materials acquired under this Act and contained in the national stockpile on the day before the date of the enactment of the Strategic and Critical Materials Stock Piling Revision Act of 1979.

"(2) Materials acquired under this Act on or after the date of the enactment of the Strategic and Critical Materials Stock Piling Revision Act of 1979.

"(3) Materials in the supplemental stockpile established by section 104(b) of the Agricultural Trade Development and Assistance Act of 1954 (as in effect from September 21, 1959, through December 31, 1966) on the day before the date of the enactment of the Strategic and Critical Materials Stock Piling Revision Act of 1979.

"(4) Materials acquired by the United States under the provisions of section 303 of the Defense Production Act of 1950 (50 U.S.C. App. 2093) and transferred to the stockpile by the President pursuant to subsection (f) of such section.

"(5) Materials transferred to the United States under section 663 of the Foreign Assistance Act of 1961 (22 U.S.C. 2423) and allocated by the President under subsection (b) of such section to the General Services Administration for stockpiling in the stockpile.

"(6) Materials acquired by the Commodity Credit Corporation and transferred to the stockpile under section 4(h) of the Commodity Credit Corporation Charter Act (15 U.S.C. 714b(h)).

"(7) Materials acquired by the Commodity Credit Corporation under paragraph (2) of section 103(a) of the Act entitled 'An Act to provide for greater stability in agriculture; to augment the marketing and disposal of agricultural products; and for other purposes', approved August 28, 1954 (7 U.S.C. 1743(a)), and transferred to the stockpile under the third sentence of such section.

"(8) Commodities transferred to the stockpile by the President under paragraph (4) of section 103(a) of such Act of August 28, 1954.

"(b) Notwithstanding any other provision of law, any material that (1) is under the control of any department or agency of the United States, (2) is determined by the head of such department or agency to be excess to its needs and responsibilities, and (3) is required for the stockpile shall be transferred to the stockpile. Any such transfer shall be made without reimbursement to such department or agency, but all costs required to effect such transfer shall be paid or reimbursed from funds appropriated to carry out this Act.

"AUTHORITY FOR STOCKPILE OPERATIONS

"SEC. 5. (a) Except for acquisitions made under the authority of paragraph (3) or (4) of section 6(a), no funds may be obligated or appropriated for acquisition of any material under this Act unless funds for such acquisition have been authorized by law. Funds appropriated for such acquisition shall remain available for a period of two fiscal years, if so provided in appropriation Acts.

"(b) Except for disposals made under the authority of paragraph (4) or (5) of section 6(a) or under section 7(a), no disposal may be made from the stockpile unless such disposal, including the quantity of the material to be disposed of, has been specifically authorized by law.

"(c) There is authorized to be appropriated such sums as may be necessary to provide for the transportation, processing, refining, storage, security, maintenance, rotation, and disposal of materials contained in or acquired for the stockpile. Funds appropriated for such purposes shall remain available to carry out the purposes for which appropriated for a period of two fiscal years, if so provided in appropriation Acts.

"STOCKPILE MANAGEMENT

"SEC. 6. (a) The President shall—

"(1) acquire the materials determined under section 3(a) to be strategic and critical materials;

"(2) provide for the proper storage, security, and maintenance of materials in the stockpile;

"(3) provide for the refining or processing of any material in the stockpile when necessary to convert such material into the form most suitable for storage and subsequent disposition;

"(4) provide for the rotation of any material in the stockpile when necessary to prevent deterioration of such material by replacement of such material with an equivalent quantity of substantially the same material;

"(5) subject to the notification required by subsection (d)(2), provide for the timely disposal of materials in the stockpile that (A) are excess to stockpile requirements, and (B) may cause a loss to the Government if allowed to deteriorate; and

"(6) dispose of materials in the stockpile the disposal of which is specifically authorized by law.

"(b) Except as provided in subsections (c) and (d), acquisition of strategic and critical materials under this Act shall be made in accordance with established Federal procurement practices, and, except as provided in subsections (c) and (d) and in section 7(a), disposal of materials from the stockpile shall be made by formal advertising or competitive negotiation procedures. To the maximum extent feasible—

"(1) formal advertising procedures shall be used in the acquisition and disposal of such materials;

"(2) efforts shall be made in the acquisition and disposal of such materials to avoid undue disruption of the usual markets of producers, processors, and consumers of such materials and to protect the United States against avoidable loss; and

"(3) disposal of such materials shall be made for domestic consumption.

"(c)(1) The President shall encourage the use of barter in the acquisition of strategic and critical materials for, and the disposal of materials from, the stockpile when acquisition or disposal by barter is authorized by law and is practical and in the best interest of the United States.

"(2) Materials in the stockpile, the disposition of which is authorized by law, shall be available for transfer at fair market value as payment for expenses (including transportation and other incidental expenses) of acquisition of materials, or of refining, processing, or rotating materials, under this Act.

"(3) To the extent otherwise authorized by law, property owned by the United States may be bartered for materials needed for the stockpile.

"(d)(1) The President may waive the applicability of any provision of the first sentence of subsection (b) to any acquisition of material for, or disposal of material from, the stockpile. Whenever the President waives any such provision with respect to any such acquisition or disposal, or whenever the President determines that the

application of paragraph (1), (2), or (3) of such subsection to a particular acquisition or disposal is not feasible, the President shall notify the Committees on Armed Services of the Senate and House of Representatives in writing of the proposed acquisition or disposal at least thirty days before any obligation of the United States is incurred in connection with such acquisition or disposal and shall include in such notification the reasons for not complying with any provision of such subsection.

"(2) Materials in the stockpile may be disposed of under subsection (a)(5) only if the Committees on Armed Services of the Senate and House of Representatives are notified in writing of the proposed disposal at least thirty days before any obligation of the United States is incurred in connection with such disposal.

"SPECIAL DISPOSAL AUTHORITY OF THE PRESIDENT

"SEC. 7. (a) Materials in the stockpile may be released for use, sale, or other disposition—

"(1) on the order of the President, at any time the President determines the release of such materials is required for purposes of the national defense; and

"(2) in time of war declared by the Congress or during a national emergency, on the order of any officer or employee of the United States designated by the President to have authority to issue disposal orders under this subsection, if such officer or employee determines that the release of such materials is required for purposes of the national defense.

"(b) Any order issued under subsection (a) shall be promptly reported by the President, or by the officer or employee issuing such order, in writing, to the Committees on Armed Services of the Senate and House of Representatives.

"MATERIALS DEVELOPMENT AND RESEARCH

"SEC. 8. (a)(1) The President shall make scientific, technologic, and economic investigations concerning the development, mining, preparation, treatment, and utilization of ores and other mineral substances that (A) are found in the United States, or in its territories or possessions, (B) are essential to the national defense, industrial, and essential civilian needs of the United States, and (C) are found in known domestic sources in inadequate quantities or grades.

"(2) Such investigations shall be carried out in order to—

"(A) determine and develop new domestic sources of supply of such ores and mineral substances;

"(B) devise new methods for the treatment and utilization of lower grade reserves of such ores and mineral substances; and

"(C) develop substitutes for such essential ores and mineral products.

"(3) Investigations under paragraph (1) may be carried out on public lands and, with the consent of the owner, on privately owned lands for the purpose of exploring and determining the extent and quality of deposits of such minerals, the most suitable methods of mining and beneficiating such minerals, and the cost at which the minerals or metals may be produced.

"(b) The President shall make scientific, technologic, and economic investigations of the feasibility of developing domestic sources of supplies of any agricultural material or for using agricultural commodities for the manufacture of any material determined pursuant to section 3(a) of this Act to be a strategic and critical material or substitutes therefor.

"NATIONAL DEFENSE STOCKPILE TRANSACTION FUND

"SEC. 9. (a) There is established in the Treasury of the United States a separate fund to be known as the National Defense Stockpile Transaction Fund (hereinafter in this section referred to as the 'fund').

"(b)(1) All moneys received from the sale of materials in the stockpile under paragraphs (5) and (6) of section 6(a) shall be covered into the fund. Such moneys shall remain in the fund until appropriated or until the end of the third fiscal year following the fiscal year in which they are received. Any such moneys remaining in the fund after the end of such third fiscal year that have not been appropriated shall be transferred to miscellaneous receipts of the Treasury. Any of such moneys that are appropriated shall be disbursed from the fund in the order in which they were covered into the fund.

"(2) Moneys covered into the fund under paragraph (1) shall be available, when appropriated therefor, only for the acquisition of strategic and critical materials under section 6(a)(1) of this Act.

"(c) All moneys received from the sale of materials being rotated under the provisions of section 6(a)(4) or disposed of under section 7(a) shall be covered into the fund and shall be available only for the acquisition of replacement materials.

"ADVISORY COMMITTEES

"SEC. 10. (a) The President may appoint advisory committees composed of individuals representing industries concerned with specified stockpile materials to advise the President with respect to the acquisition, transportation, processing, refining, storage, security, maintenance, rotation, and disposal of such materials under this Act.

"(b) Each member of an advisory committee established under subsection (a) while serving on the business of the advisory committee away from such member's home or regular place of business shall be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for persons intermittently employed in the Government service.

"REPORTS TO CONGRESS

"SEC. 11. The President shall submit to the Congress every six months a written report detailing operations under this Act. Each such report shall include—

"(1) information with respect to foreign and domestic purchases of materials during the preceding six-month period;

"(2) information with respect to the acquisition and disposal of materials under this Act by barter, as provided for in section 6(c) of this Act, during such period;

"(3) a statement and explanation of the financial status of the National Defense Stockpile Transaction Fund and the anticipated appropriations to be made from the fund during the next fiscal year; and

"(4) such other pertinent information on the administration of this Act as will enable the Congress to evaluate the effectiveness of the program provided for under this Act and to determine the need for additional legislation.

"IMPORTATION OF STOCKPILE MATERIALS

"SEC. 12. Notwithstanding any other provision of law, the President may not prohibit or regulate the importation into the United States of any material determined to be strategic and critical pursuant to the provisions of this act, if such material is the product of any foreign country or area not listed as a Communist-dominated country or area in general headnote 3(b) of the Tariff Schedules of the United States (19 U.S.C. 1202), for so long as the importation into the United States of material of that kind which is the product of such Communist-dominated countries or areas is not prohibited by any provision of law.

"DEFINITIONS

"SEC. 13. For the purposes of this Act:

"(1) The term 'strategic and critical materials' means materials that (A) would be needed to supply the military, industrial, and essential civilian needs of the United States during a national emergency, and (B) are not found or produced in the United States in sufficient quantities to meet such need.

"(2) The term 'national emergency' means a general declaration of emergency made by the President or by the Congress."

SEC. 3. Nothing contained in this Act shall be construed as amending, repealing, replacing, or otherwise affecting the authority contained in any Act, including the Act entitled "An Act to amend the United Nations Participation Act of 1945 to halt the importation of Rhodesian chrome", approved March 18, 1977 (91 Stat. 22), other than the Strategic and Critical Materials Stock Piling Act, as in effect on the day before the date of the enactment of this Act, regarding the acquisition or disposal of strategic and critical materials for the United States.

SEC. 4. (a)(1) Section 103(a) of the Act entitled "An Act to provide for greater stability in agriculture; to augment the marketing and disposal of agricultural products; and for other purposes", approved August 28, 1954 (7 U.S.C. 1743(a)), is amended—

(A) by striking out "the national stockpile established pursuant to the Act of June 7, 1939, as amended (50 U.S.C. 98-98h)" in paragraph (4) and inserting in lieu thereof "the National Defense Stockpile established by the Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98 et seq.)";

(B) by striking out "the national stockpile established pursuant to the Act of June 7, 1939, as amended" in the third sentence and inserting in lieu thereof "the National Defense Stockpile established by the Strategic and Critical Materials Stock Piling Act"; and

(C) by striking out "funds appropriated pursuant to section 8 of such Act of June 7, 1939" in the third sentence and inserting in lieu thereof "funds appropriated for the purposes of that Act".

(2) Section 105 of such Act (7 U.S.C. 1745) is amended by striking out "the national stockpile established pursuant to the Act of June 7, 1939, as amended (50 U.S.C. 98-98h)" and inserting in lieu thereof "the National Defense Stockpile established by the Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98 et seq.)".

(b) Section 4(h) of the Commodity Credit Corporation Charter Act (15 U.S.C. 714b(h)) is amended by striking out "section 2 of the Strategic and Critical Materials Stock Piling Act (60 Stat. 596)" and inserting in lieu thereof "section 3 of the Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98a)".

(c) Section 303(f) of the Defense Production Act of 1950 (50 U.S.C. App. 2093(f)) is amended—

(1) by striking out "the national stockpile established pursuant to the Act of June 7, 1939, as amended," in the first sentence and inserting in lieu thereof "the National Defense Stockpile established by the Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98 et seq.)"; and

(2) by striking out "from funds available under such Act of June 7, 1939, as amended" and inserting in lieu thereof "from funds appropriated for the purposes of such Act".

Senator HART. This bill is, in essence, the same bill reported out by the Senate Armed Services Committee during the 95th Congress.

Since the bill has already undergone detailed study by the committee, I do not envision the need for extensive hearings and restudy this year. I am hopeful that we can hear from key administration witnesses this morning and act rapidly to report the bill.

Representative Bennett is moving a companion bill in the House of Representatives which is quite similar to S. 290 and I am encouraged that we should be able to resolve stockpile policy issues before we have to consider commodity legislation. I remain committed to the concept of establishing a solid stockpile policy and management base before getting into the buying and selling of stockpile materials.

To the extent possible I would like to keep this an open hearing; however, at some point we may get into classified issues which will require us to move into executive session. The witnesses are cautioned to reserve classified discussion for executive session.

The record of these hearings will be kept open until March 26, 1979, so that any interested party may submit information to be considered for submission in the record.

Our colleague, Senator Proxmire, has indicated an interest in appearing here this morning. He has been interested in the whole stockpile issue. We expect him here in the very near future, at which time we will suspend our other witnesses to hear from him. In the meantime, we are pleased to have witnesses who have been called before us and we will hear first from Mr. Dale Church, who is the Deputy Under Secretary for Acquisition Policy in the Office of the Under Secretary of Defense for Research and Engineering.

Senator Thurmond requested that his opening statement be inserted in the hearing record at this point. Without objection, I will insert his prepared statement in the record.

[The prepared statement of Senator Thurmond follows:]

PREPARED STATEMENT OF SENATOR STROM THURMOND

Mr. Chairman: The pending bill, S. 290, revises the Strategic and Critical Materials Stock Piling Act, much as was proposed by this Committee last year. I supported that bill, and I support this one.

As the Chairman knows, the main differences between the Senate and House bills involve questions as to the management of the Transaction Fund. These issues I hope can be resolved in Conference.

Mr. Chairman, I fully support your approach that it would be highly beneficial to resolve these stockpile policy issues prior to consideration of any commodity legislation, and I am ready to cooperate in that endeavor. Thank you.

Senator HART. Mr. Church, please proceed. You might introduce the other witnesses who are accompanying you.

STATEMENT OF DALE W. CHURCH, DEPUTY UNDER SECRETARY FOR ACQUISITION POLICY, OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING, ACCOMPANIED BY BRIG. GEN. LEIGHTON PALMERTON, DEPUTY DIRECTOR FOR PLANNING AND RESOURCES, J-4, OFFICE OF THE JOINT CHIEFS OF STAFF

Mr. CHURCH. Mr. Chairman, it is indeed a pleasure to come before you this morning and to speak positively about S. 290, a bill which has been very well done.

Today I have with me Brig. Gen. Leighton Palmerton from the Organization of the Joint Chiefs of Staff, who is well prepared to discuss issues involving classified scenarios in executive session so, we will bring those up later.

Senator HART. It is a pleasure to have you.

Mr. CHURCH. We'll defer to the Federal Preparedness Agency as to the technicalities of S. 290. I would like to say we totally and enthusiastically endorse the bill, its intent and its features.

From the Defense Department's standpoint, the three features we like best include the statement which makes clear the purpose of the stockpile is to support the military, industrial, and essential civilian needs for national defense.

Second, S. 290 permits the barter of government property and excess stockpiled materials. Third, it establishes a national defense stockpile transaction fund for the moneys received which are in excess of our needs, funds which would then be available for acquisition of materials we badly need, even at the present time.

We recently addressed portions of H.R. 2154 with respect to some technicalities which we could not support as contained in that bill. They do not exist in Senate bill 290. Therefore, I am pleased to say again very positively and enthusiastically, S. 290 is a very fine bill and is very well done. I understand there are a few problems which the Federal Preparedness Agency will address, but from the Defense Department's standpoint, we applaud your intent to move it through the Senate in the most rapid fashion possible.

Thank you.

Senator HART. Thank you, Mr Church. We rarely get that kind of support for our legislation. I appreciate your wholehearted endorsement.

General Palmerton, I know that you have no opening statement. Do you have any thoughts or comments that you wish to add at this point?

General PALMERTON. Not at this time, sir.

Senator HART. Thank you. We will then hear from our next witness, Mr. Joseph Mitchell, who is Director of the Federal Preparedness Agency of the General Services Administration.

Mr. Mitchell, it's a pleasure to have you and you may introduce any of those accompanying you.

STATEMENT OF JOSEPH A. MITCHELL, DIRECTOR, FEDERAL PREPAREDNESS AGENCY, GENERAL SERVICES ADMINISTRATION, ACCOMPANIED BY EDWARD ZABROWSKI, ACTING ASSISTANT DIRECTOR, NATIONAL RESOURCES PREPAREDNESS OFFICE; ROY MARKON, COMMISSIONER, FEDERAL PROPERTY RESOURCES SERVICE, GSA; AND PAUL KRUEGER, ACTING CHIEF, NATIONAL DEFENSE STOCKPILE POLICY DIVISION

Mr. MITCHELL. Thank you, Senator Hart. It is a pleasure to be here this morning and present our views on S. 290.

With me to my right is Mr. Ed Zabrowski, who is Assistant Director for our National Resources Preparedness Office, which includes the stockpile area, and Mr. Roy Markon from GSA, who is director of the Federal Property Resources Service, and Mr. Paul Krueger, behind Mr. Zabrowski, who is Acting Chief of the National Defense Stockpile Policy Division.

First, Senator, let me also say that we are here to give our support to the bill this morning. I would like to take a moment to commend the subcommittee for its fine work in this area and for bringing this important policy issue to the attention of the Congress.

As you know, we are also in full accord with you in our joint efforts to improve the strategic stockpile program and strengthen national security.

As you know, the House Armed Services Committee has reported for floor action its bill, H.R. 2154. The House measure contains some amendments which we suggested and which are similar to amendments that we are proposing before this subcommittee.

An attachment to my testimony which I will submit for the hearing record outlines those suggested technical amendments.

Otherwise, we really only have two reservations about S. 290 as it now stands. First, section 5 (a) gives only a 2-year life to appropriated moneys for stockpile acquisitions. We would propose a longer period, 5 years.

Second, section 9 says moneys may remain unappropriated in the transactions fund for 3 years. We would suggest reducing that period to 2 years. We believe this total 7-year period to utilize moneys would give stockpile management the flexibility to make purchases with the least disruption in the market.

Also, the longer period in which to use appropriated moneys would give us the necessary opportunity to get materials at better prices.

Mr. Chairman, these are the only substantive reservations we have about the bill at this time. We think it is a good measure which will enable us to undertake an active and effective program of stockpile acquisitions and disposals.

In the present fiscal year 1980 budget, we propose authorization of \$177 million for acquisitions including transportation costs. To balance the acquisition costs, we are proposing legislation which would authorize disposal of materials resulting in \$177.4 million worth of receipts during fiscal year 1980.

Therefore, we do favor quick action on the bill.

Mr. Chairman, also if I might just take a moment to address the amendments to S. 290 which have been proposed by Senator Proxmire and are part of this discussion today. The first amendment, No. 67, proposes to delete the category "industrial needs" from our calculations of material. This amendment, we believe, runs counter to the fundamental stockpile philosophy since 1939 which we believe to be sound. Adoption of this amendment would limit stockpiling considerations only to strictly defense-oriented industries, and the severe survival needs of the civilian population. The realities of American manufacturing require a broader view.

In our stockpiling terms, the "general civilian tier" refers to the austere needs of the population and those industries which, while not obviously defense-related, could prove very important to the defense industry if they were shut down.

For instance, metal fasteners are extremely important in aircraft manufacturing, but some plants also make them for office equipment.

We divide stockpile considerations into three groups of industries of various importance to national defense, and we believe these divisions enable us to stockpile materials in a realistic and effective way.

Mr. Chairman, amendment No. 68 suggests a change of authority to dispose of stockpile materials from the current system, which now requires authorization legislation. The amendment also imposes time limits and other restrictions which would effectively tie the President's hands if quick action were required to meet a peacetime supply emergency affecting the national defense.

At the same time, we think the amendment would eliminate the Congressional oversight process, which allows all views to be heard, and would make it easier to sell materials without adequate consideration.

Lastly, we would oppose amendment No. 69, which would require paying to the Treasury Department interest on the market value of stockpiled materials. The benefit to the Nation of having the materials on hand should obviate payment of interest. Since we believe this only to be a bookkeeping entry, the net effect of this amendment would be the executive branch asking Congress for money to pay the executive branch each year.

Mr. Chairman, that concludes my opening statement on the major points of S. 290. As I mentioned earlier, we are submitting for the record a more detailed statement as well as attachments addressing specific technical amendments.

[The prepared statement follows:]

PREPARED STATEMENT OF JOSEPH A. MITCHELL, DIRECTOR, FEDERAL PREPAREDNESS AGENCY, GENERAL SERVICES ADMINISTRATION

Mr. Chairman and Members of the Subcommittee: I want to thank you for the opportunity of appearing before you to present our views on S. 290.

I would like to commend the Committee's efforts in bringing the basic policy bill, S. 290, to the attention of the Congress. We are in agreement with the intent of S. 290 to strengthen the contribution of the strategic stockpile to our national security. The bill preserves important existing authorities, and provides flexibility needed to ensure an efficient stockpile program. We look to this revision of the basic stockpiling authority as the basis for restructuring of the strategic and critical materials stockpile. We offer, however, a number of amendments to S. 290, primarily technical, which we believe will make it a clearer and more effective bill.

We do have two reservations with S. 290, specifically with Sections 5 and 9. We propose that Section 5(a) give five-year life to appropriated moneys and that Section 9 be amended to reduce from three to two years the time that money shall remain unappropriated in the "Transactions Fund." The total seven-year period with which to utilize moneys would give stockpile management enough flexibility to program purchases of needed materials in a manner least disruptive of materials' markets and at the same time provide the opportunity to acquire the material at the best price. Further, such language would provide the President with budgetary flexibility, after the seven year period, to direct unspent moneys into other high priority programs.

As you know, the House Armed Services Committee reported out favorably H.R. 2154, a policy bill similar to S. 290. H.R. 2154 incorporated amendments such as we are offering for S. 290. The Administration, while agreeing with the intent of H.R. 2154, can not support the bill because it contains no "sunset" provision for moneys placed in the Fund. S. 290 has such a provision. For insertion in the Senate record, I would like to include our official comments on H.R. 2154 which were sent to Chairman Price of the House Armed Services Committee.

We trust that action on S. 290 can be expeditious so that we can move on to an active program of acquisitions and disposals. In the President's fiscal year 1980 budget, we have proposed authorizations of \$177 million for acquisitions, which includes \$16.5 million for transportation. In balancing these acquisition costs, we are proposing legislation to authorize the disposal of sufficient stockpile material to generate \$177.4 million in receipts during fiscal year 1980.

Permit me to comment on Senator Proxmire's three proposed amendments to S. 290.

Amendment number 67 would delete the industrial needs from our calculation of material goals. We do not believe that the industrial needs (which we are calling the "General Civilian Tier" until we have a new policy bill) should be removed.

Our view is that the United States could not fight an extended conventional war without a strong civilian economy. This principle is embodied in the National Security Act, the Strategic and Critical Materials Stock Piling Act and in the Defense Production Act, and reflects the actual experience of World War II and the Korean conflict.

Industries do not produce just defense or just essential civilian or industrial products. Instead a single worker on a production line may produce industrial fasteners for aircraft, for farm machinery, and for office equipment. A single factory could also produce a variety of products which fall in different categories. Prior experience indicates that severe economic dislocations occur when an adequate level of support is not given to the industries providing indirect inputs to critical defense and non-defense production. For example, during World War II when the industrial structure was far less complex and interrelated than it is today, planners found that:

"It soon became only too evident that it was impossible to separate sharply 'civilian' and 'defense' materials and facilities at a time when defense requirements were everywhere reaching down into industry stockpiles and military and commercial items were being produced side-by-side in the same factories." (George W. Auxier, *Industrial Mobilization for War: History of the War Production Board and Predecessor Agencies 1940-45*).

"A civilian economy characterized by health and vigor is basic to effective production for war; and whatever is needed to keep the economy running so that it can further the war effort represents an essential claim on the national resources." (Harry B. Yoshpe, *Economics of National Security: Matching Needs with Resources*).

Prior to the introduction of the approach now in use, all requirements, defense and civilian, were lumped together in one aggregate: a pound of copper for cartridge cases was given the same importance as a pound of copper for kettles. We believe that, by separately treating defense, essential civilian, and industrial (that is general civilian) requirements, we have enhanced national security planning. Furthermore, our subdivisions create a smaller stockpile than if the subdivisions were combined.

FPA really does not stockpile for "civilian" needs in the "butter" sense that these words imply to lay persons. The "butter" or "fat" of the economy is removed through austerity assumptions first. These assumptions are directed both at the level and composition of spending patterns in the economy.

Amendment number 68, which would allow disposal of excess stockpile materials without authorization legislation, would both restrict and liberalize the release of materials from the stockpile. We do not agree with the thrust of this amendment for two reasons.

First, its effect would reduce the flexibility of the President in dealing with common defense contingencies which call for prompt and direct executive action respecting releases from the strategic stockpile. It does not provide for peacetime releases necessary for the common defense, unless Congress has been notified 90 days in advance; unless the material necessary is excess to the goal; and unless the amounts required are less than the strict limits imposed by the amendment.

Second, it would remove the oversight of disposal actions by the Congress and deny an opportunity for comments by industry and other concerned parties.

Amendment number 69 would require the payment of interest on the current market value of the stockpile. Senator Proxmire proposes this so that the opportunity cost of holding the stockpile is highlighted. Within the context of government programs, the opportunity cost of any one program is the incremental borrowing cost the Treasury would not have to pay if that program were abolished. FPA rejects this reasoning on several grounds.

The holding of every government asset involves an opportunity cost. These assets would include not only the stockpile but also government-owned buildings, computers, aircraft carriers, etc. Offsetting the opportunity costs for holding all of these assets is the value obtained by using them. In the case of buildings the use value is approximated by what it would cost to rent equivalent space, and for computers the cost of leasing equivalent equipment. For military assets, including the stockpile, numerous benefits accrue to the holder of the assets.

For the stockpile, such benefits include the additional output the economy can produce due to the availability of a raw material in a wartime contingency. More than the additional output valued at current prices is involved. The extra output could be the difference between military victory and defeat. Another annual benefit flowing from the stockpile is its war or embargo "deterrence effect." Having a materials stockpile, visible to opponents, makes our war materials preparedness obvious. They are thus less likely to engage in materials intensive war or embargo materials imports to the U.S.

This bookkeeping entry would require the executive branch to ask Congress for an appropriation which would be paid out of the Treasury and then repaid into the Treasury. In 1974 a similar requirement was added to the Defense Production Act Inventory. Congress has never appropriated the funds for such payment.

With respect to the specific recommended amendments to S. 290, we believe they will provide protection for the taxpayer, preserve legislative history, reduce the possibility of ambiguity in the future and provide standing operational authority where it is appropriate. Rather than read these amendments, we would like to provide copies for insertion in the record.

PROPOSED AMENDMENTS TO S. 290

On page 3, line 15, insert the words "for up to three years" after "States" and in line 16 strike everything after "emergency" and insert in lieu thereof a period. As presently written, this phrase "up to three years in duration" specifies the length of the national emergency and not the number of years which will be covered in the stockpile. For example, President Nixon's stockpile policy was to stockpile for the first year of a national emergency of indefinite duration. We believe the Committee's intent is to have a "three-year" stockpile. This intent can be carried out if Section 3(b)(2) is amended as proposed.

On page 3, lines 18 and 19, after the word "revised," insert the words "by less than 10 per centum." This would restore the intent of a version of the bill passed by the House and reported out favorably by the Senate Armed Services Com-

mittee (H.R. 4895) in the 95th Congress. The original intent of this provision, we believe, was to prevent frequent changes in stockpile goals because industry interest groups found them unsettling. Accordingly, we agreed to support legislative language that would restrain the establishment of minor changes to stockpile goals. Since the bill requires Congressional approval for both acquisition and disposal authority, we believe this provides sufficient control.

On page 5, line 1, strike everything after "(22 U.S.C. 2423)" and insert in lieu thereof "that have been determined to be strategic and critical for purposes of this Act and that are allocated by the President under subsection (b) of such section 663 for stockpiling in the stockpile." Since the definition of material under section 663 of the Foreign Assistance Act of 1961 is so much more broad in application than the definition of strategic and critical materials under S. 290, we propose the above amendment to limit the allocation of materials to the stockpile to strategic and critical materials. By doing so, we avoid the application of section 4(a)(5) of the bill to materials that might be allocated by the President to GSA for stockpiling outside the National Defense Stockpile. Examples of such materials might include uranium, lithium, rare earths, selenium, magnesium or even coffee which currently are not strategic and critical materials.

On page 5, line 16, strike "Commodities" and insert in lieu thereof "Materials." This change in language is recommended as a matter of consistency since all the previous paragraphs start with the word "Materials."

On page 5, immediately after subparagraph Section 4(a)(8), add a new subparagraph 4(a)(9), as follows: "(9) Materials transferred to the stockpile under Subsection (b)." This amendment is recommended as a matter of consistency so that transfers made to the stockpile under Section 4(b) will be included in the section that provides for the makeup of the stockpile.

On page 6, line 8, after the word "acquisition," insert "(and for transportation related to such acquisition)." This would ensure that acquisition costs would be fully covered, including transportation to storage sites.

On page 6, line 9, strike "two" and insert in lieu thereof "five." We recommend the change because two fiscal years may not be enough time to enter the market to purchase the needed material in a non-disruptive manner. Furthermore, if the suppliers of the material realize that we have only two fiscal years in which to purchase the needed materials, they may be able to create a situation in which the Government would pay more for the material than normally. Without the two-year restraint, we would have the latitude to enter the market in the least disruptive manner and at a time when we believe the price is right for the material.

On page 8, line 3, strike "formal advertising" and insert in lieu thereof "competitive." We recommend this change because we believe that this is the language that was intended (see second full paragraph on page 6 of Senate Report No. 95-846 that accompanied H.R. 4895 of the 95th Congress, second session). The first sentence of Section 6(b) provides for the use of competitive negotiation procedures in the disposal of stockpile materials and that acquisition of stockpile material be made in accordance with established Federal procurement practices which include the use of competitive negotiation procedures. It is our belief that subparagraph 6(b)(1) is intended to cover situations that deviate from competitive procurements or disposals, not just a deviation from formal advertising procedures, a term which does not encompass competitive negotiation. The situations which we believe are intended to be covered are situations where there is no competition such as sole source procurements and disposals, and disposal to a foreign government.

On page 9 immediately after subparagraph 6(d)(2) add a new paragraph 6(e), as follows:

"(e) The President is authorized to acquire leasehold interests in property, for periods not in excess of twenty years, for storage, security, and maintenance of strategic and critical materials."

We recommend this amendment without the proviso "provided said leasehold interests are at nominal cost to the Government," as is currently set forth in GSA Appropriation Act. The leasing authority was granted GSA in 1950 in its Appropriation Act (and in every one since). It was the policy of the Office of Defense Mobilization (predecessor agency to the Office of Emergency Preparedness and Federal Preparedness Agency) that stockpiles be located as close as possible to the ultimate user of the material. Because of this policy and the limitation on the leasing authority, we were only permitted to lease land next to users that would lease to us at nominal costs, e.g., a dollar a year. Companies in the 1950's were willing to oblige the Government with nominal value leases. However, this benevolence has eroded over the years to the extent that the proviso has made it extremely difficult to secure long term leases today. The authority to lease for 20 years is critical to proper management of the stockpile. Furthermore, by re-

moving the proviso, we would have the flexibility needed to obtain competition in our leasing program, and we would be able to locate strategic and critical materials in proximities that could give us the greatest potential utilization of such materials in relation to the industry needs in time of emergency. Without the long term leasing authority, we will be required to relocate materials at a high cost to the Government. The mandate of the Strategic and Critical Materials Stock Piling Act requires that materials be available for emergency needs, and this mandate does not have a termination date. Consequently, we need this authority to properly execute our responsibilities.

On page 12, lines 4 and 6, change the word "third" to "second." When considered in the context of Section 5(a), that is, the section giving five-year life to appropriated moneys, the two year period gives enough flexibility for stockpile management to utilize sales proceeds. It also preserves the President's budgetary flexibility, after the seven year period, to utilize unspent moneys for other priority programs.

On page 12, line 14, immediately after "Act" add "(and for transportation related to such acquisition)." We recommend this addition because when acquiring stockpile materials, appropriations are needed both for the purchase of the material and for the cost of transporting the material to the stockpile location. In the past, acquisition appropriations have lumped the transportation costs with the cost of the material. The authority to appropriate for transportation in Section 5(c) of the bill covers transportation costs other than in connection with acquisitions. For example, transportation costs related to consolidating storage locations.

On page 12, lines 22 and 23, strike "representing industries concerned with specified stockpile materials" and insert in lieu thereof "with expertise relating to materials in the stockpile or with expertise in stockpile management". This amendment is recommended to give flexibility in drawing expertise on stockpile materials and stockpile management not only from industry but from academia, or other parts of the business community. We recommend that the scope of the appointment authority be broadened to include advisory committees for stockpile management. This would enable GSA to formalize its practice of meeting with representatives of industry to discuss aspects of stockpile management, e.g., disposal plans, marketing practices and storage practices.

On page 15, line 2, immediately after "emergency" insert, "with respect to the national defense." This addition is recommended to make it clear that material will be released from the stockpile only under conditions that affect the national defense of the United States.

On page 16, line 17, immediately after "amended" add "(1)" and on line 21 strike the period and insert in lieu thereof "; and (2) by striking out 'Munitions Board of the National Military Establishment' and inserting in lieu thereof 'President'."

On page 17 immediately after section 4(c)(2) of the bill, add the following:

"(d) Section 204(f) of the Federal Property and Administrative Services Act of 1949, as amended, by striking out 'Munitions Board' and inserting in lieu thereof 'President'."

These changes would update the legislation to conform to transfers of authority through reorganization plans. The authorities vested in the Army and Navy Munitions Board by the 1946 amendment to the Strategic and Critical Materials Stock Piling Act (Public Law 520, 79th Congress, approved July 23, 1946); section 4(h) of the Commodity Credit Corporation Charter Act, as amended (15 U.S.C. 714b (h)); and section 204(e) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 485(e)), were transferred to the Director of the Office of Defense Mobilization by Reorganization Plan 3 of 1953. Subsequently the authorities were transferred, by Reorganization Plan 1 of 1958, to the President in whom the authorities presently reside.

MARCH 12, 1979.

HON. MELVIN PRICE,
Chairman, Committee on Armed Services,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: By letter of February 26, 1979, your office requested the views of the General Services Administration (GSA) on H.R. 2154, a bill "To revise the Strategic and Critical Materials Stock Piling Act, to require that appropriations for acquisition of strategic and critical materials be authorized by law, to establish a National Defense Stockpile Transaction Fund, and for other purposes."

We are in general agreement with the intent of H.R. 2154 to strengthen the contribution of the strategic stockpile to our national security. The suggested changes preserve important existing authorities, or provide the flexibility needed to ensure an efficient stockpile program.

The Administration has one major reservation. H.R. 2154 would allow unappropriated moneys to remain dormant in the Stockpile Fund created by Section 9(b)(1). The Administration cannot support H.R. 2154 because of this provision. Alternative language is proposed that will overcome the Administration's objection to the bill.

Other technical amendments to the bill are offered for the Committee's consideration. We believe that they will provide protection for the taxpayer, preserve legislative history, reduce the possibility of ambiguity in the future and provide standing operational authority where it is appropriate.

The proposed amendments to H.R. 2154 are as follows:

On page 3, line 16, insert the words "for up to three years" after "States" and in line 17 strike everything after "emergency" and insert in lieu thereof a period. We believe the intent of the language in H.R. 2154 is to permit stockpiling for the first three years of a war during a period of national emergency. The assumed national emergency may include a prior warning period, but we do not stockpile for warning periods. The proposed language will alleviate any ambiguity associated with these different periods of stockpile activity.

On page 3, line 20, after the word "revised," insert the words "by less than 10 per centum." This would restore the words of an earlier version of the bill. The original intent of this provision, we believe, was to prevent frequent changes in stockpile goals because industry interest groups found them unsettling. Accordingly, we agreed to support legislative language that would restrain the establishment of minor changes to stockpile goals. Since the bill requires Congressional approval for both acquisition and disposal authority, we believe this mechanism provides sufficient control.

On page 4, line 4, immediately before the word "materials" insert the words "strategic and critical." Even though the specific Acts covered in the paragraphs under Section 4 mention strategic and critical materials, the term is not specifically defined in some of those Acts. In others, where the term is defined, it is broader in application than is defined in the bill. Consequently, it is our opinion that the term "strategic and critical" should be set forth in the preamble to Section 4 to tie the materials that are to constitute the National Defense Stockpile to the definition under the bill.

On page 6, line 8, after the word "acquisition," insert "(and for transportation related to such acquisition)." It is our intent that acquisition costs be fully covered, including transportation, in pursuing the acquisition of strategic materials for the national defense.

On page 12, lines 16 through 18, we recommend that Section 9(b)(3) be deleted or be amended to be consistent with Section 5(a). As it exists, Section 9(b)(3) is redundant and inconsistent with the earlier authorization language in the bill, in that, Section 9(b)(3) provides that funds appropriated will remain available until expended, whereas Section 5(a) provides that appropriated funds will remain available for a period of 5 years. It is our opinion that the operative language of Section 5(a) (as amended by the above) will provide the necessary flexibility to make the authorized acquisitions.

We propose the following amendment to replace Section 9(b)(1):

"(b)(1) All moneys received from the sale of materials in the stockpile under paragraphs (5) and (6) of Section 6(a) shall be covered into the fund. Such moneys shall remain in the fund until appropriated or until the end of the second fiscal year following the fiscal year in which they are received. Any such moneys remaining in the fund after the end of such second fiscal year that have not been appropriated shall be transferred to miscellaneous receipts of the Treasury. Any of such moneys that are appropriated shall be disbursed from the fund in the order in which they were covered into the fund."

This language, when considered in the context of Section 5(a), that is, the section giving five-year life to appropriated moneys, provides the needed flexibility for stockpile management to utilize sales proceeds. For example, assume some stockpile materials were sold at mid-year of fiscal 1980. Then the stockpile managers would have until the end of fiscal 1982 to get the moneys appropriated, after which they would remain available for an additional five years, or a total of seven and one-half years. On the other hand, when satisfactory stockpile levels are

achieved, and no appropriations made, the moneys can revert to the Treasury's Miscellaneous Receipts account to be used for other high-priority Administration programs.

The Office of Management and Budget has advised that, from the standpoint of the Administration's program, there is no objection to the submission of this report to your Committee.

PAUL E. GOULDING,
Deputy Administrator.

Senator HART. Thank you, Mr. Mitchell.

Do any of the witnesses accompanying you have any opening remarks to supplement what you have said?

Mr. MITCHELL. No, sir.

Senator HART. Thank you very much.

I am pleased to welcome a new member to the subcommittee; he is also a new member of our full committee, Senator Humphrey of New Hampshire.

I strongly believe, from my own parochial interest, that we deal here in military construction and also with the stockpile in a kind of a dark area that many people don't pay much attention to, but which in the case of the construction budget is \$4 billion of the taxpayers' dollars.

In the stockpile, the economic ramifications of that are enormous and often go largely unnoticed or undetected or are not widely considered by the Congress, the peoples' elected representatives.

Now I feel very strongly that this is a very important subcommittee and deserves a great deal of concern on the part of Congress and the American people. I'm pleased that we have new members on the committee, and I know that they will take this assignment seriously.

Senator Humphrey, it is a pleasure to have you. Do you have any opening remarks?

Senator HUMPHREY. No, thank you very much.

Senator HART. Mr. Mitchell, let me ask you to clarify one observation or comment that I think you made with regard to Senator Proxmire's proposed amendments. He has made an issue in the past and I think again this year of the costs of the so-called industrial tier.

It is my understanding, according to his estimates, that tier costs about \$6 billion. Do you have any additional comments or thoughts about that cost, that figure, or his proposal to largely reduce or eliminate that figure?

Mr. MITCHELL. Yes, sir, we do. I would like to ask Mr. Zabrowski if he might answer that for us, Senator, if that might be all right.

Senator HART. If you would, yes.

Mr. ZABROWSKI. Good morning, Senator.

The general civilian tier, as Mr. Mitchell pointed out, comprises roughly 50 percent of the total value of the stockpile goals. As we have indicated, however, cost alone doesn't indicate the degree of safety that is provided by this tier to the economy.

First of all, I think we have mentioned our stockpile goals, when calculated, are based on what is left in the economy after the fat is removed. These are things we believe to be absolutely necessary to run the economy during wartime.

It has been, as Mr. Mitchell pointed out, the way of calculating the stockpile goals since 1939. It provides a buffer for the general economy and also provides a safety factor for both what we call the essential civilian tier and the DOD tier in case errors are made in our own

planning and demands are in fact more heavily laid on the economy than we would expect.

Senator HART. Do you have any thoughts or comments on his calculations about the cost of that tier?

Mr. ZABROWSKI. No, sir, I believe his estimates are essentially correct. In current prices, the cost of that tier is roughly \$6.4 billion. However, we do have already in current inventory, \$2.1 billion of goals fulfilled, leaving us with \$4.5 billion that we have to procure.

Senator HART. I can't recall, we will ask him when he's available, whether he proposes to dispose of the inventory that we have. I can't remember. It seems to me that he does.

Mr. Mitchell, I think your prepared remarks have reservations with regard to the sunset provision in our proposal. I think you are suggesting that that provision on the fund be reduced from 3 years to 2 years.

Since that fund is really an accounting pool and will not really affect receipts to or from the Treasury, why do you believe that that is an important provision?

Mr. MITCHELL. As we've mentioned, Mr. Chairman, we think the timing, although it is not a major point with us, would be better for the smaller time than it would be for the 3-year effort. This is what we had discussed on the House side and what we are recommending for this committee.

We think there is enough time in the 2 years. It is not a major point with us, but that would be our recommendation.

Senator HART. That was what I was trying to get at, how strongly do you feel about this. You know, the House bill does not have a sunset provision. We were trying to determine for our purposes how strongly the administration feels about this point, what the President's views would be about a bill without a sunset provision at all, whether he would be inclined or you would advise him to veto such a provision.

Mr. MITCHELL. The point, having no sunset provision at all, as we, I think, mentioned last year, Senator, and you're well aware, the President does feel very strongly about a fund that would have no sunset provision, you might say, for the stockpile program.

The language in both the Senate version and the House version today is very close to how the President would feel about this today. I would think that that is the major consideration that the administration would have. The fact of having a sunset provision in 2 to 3 years, as we have noted, that is the major element, I would think the President, although I certainly could not say whether he would veto or not veto the bill—would be very much in disagreement with that provision if it did not have a sunset.

Senator HART. S. 290 proposes a 2-year life for authorizations for appropriations. You prefer a 5-year life. Can you tell the committee what the situation is in existing law with regard to authorizations?

Mr. ZABROWSKI. Under existing law, Senator, we have standing authorizations for appropriations. They're good until expended.

Senator HART. I want to pursue that a minute because if the policy bill is enacted, Congress of course will be looking at periodic, probably annual commodity bills, and of course supposedly would be specifically authorized by commodity by quantity and acquisitions on the other

hand, would be lump sum authorizations due of course to market sensitivity of the commodity data.

Assuming you get appropriations, you could spend up to the authorization ceiling for needed materials. We included a 2-year authorization to avoid a kind of end-of-year panic buying that can accompany 1-year funds. But I really don't see any reason to drag the authority out to 5 years.

During that 5-year period we would be looking at new commodity bills. We can adjust the authorization to accommodate any market dynamics.

I would like for you to review this situation and see if you really need a 5-year authorization or if you don't have the flexibility you need, then you would need in a 2-year lump sum authorization.

Any comments you might have on that now or while the record still remains open, we would appreciate it.

Mr. MITCHELL. Mr. Markon, would you care to comment on that?

Mr. MARKON. Yes. Mr. Chairman, I'm Roy Markon, the Commissioner of the Federal Property Resources Service.

The execution of the annual plans and the legislation as presented to Congress would fall with the GSA. We feel that the 5 years are necessary. We have market constraints to consider, and because of market constraints, in order to avoid undue disruption of the market and also to act in the best interests of the United States, it is very difficult to project and predict what will happen in the short period of time of just 2 years.

Five years, however, will give us sufficient flexibility in order to execute on these programs without violating those two restraints of undue market disruption and acting in the best interests of the United States. In the market that we deal in, it is a period of time more compatible with the types of dealings we are having than the 2-year period.

Senator HART. Obviously what we are struggling with here is the competing interests of periodic congressional oversight review and some congressional control on the one hand, and on the other hand, the necessity for administrative flexibility to accommodate the shifts and changes in the market.

The committee wants to do what is right with regard to both of those interests and try to balance them, and particularly these days continue or expand congressional oversight responsibility. I think it is necessary to be responsible for the taxpayers' funds.

Mr. MARKON. There would be continuous congressional oversight. All of our activities would be monitored. A legal limitation would reduce the flexibility that we have to execute the program, but it would not take away from congressional oversight.

Senator HART. Oversight seems to have more teeth in it than you have the authorization capability.

Mr. MARKON. That is right.

Senator HART. I'm also pleased to welcome at this time our ranking minority member, Senator Thurmond, who of course has paid a great deal of attention to this subject over the years.

Senator, do you want to make any opening comments at this point?

Senator THURMOND. Mr. Chairman, I ask unanimous consent that my opening statement follow your opening statement in the hearing record. I have a few questions here.

Mr. Mitchell will you provide for the record your reasons for supporting a five-year life to appropriated moneys, as against the committee approach in section 5(a)?

Mr. MITCHELL. I would be happy to, Senator.

[The information follows:]

We believe that we need the five years, rather than the more limiting two years, in Section 5(a) to give us greater flexibility in dealing with volatile commodity markets. The greater time would allow us to phase acquisition actions so that there is the least disruption to normal commodity markets. Also, this flexibility would enable us to acquire the materials at the best price for the taxpayer dollar. Finally, we do not believe that this extension of time will reduce the Congressional oversight of acquisition actions, since the Congress can ultimately control the time period in appropriation acts.

Senator THURMOND. Mr. Mitchell, you also recommend that in the provisions of section 9, the time be reduced from 3 to 2 years for the money form sales to remain unappropriated in the transaction fund. This means the stockpile transfer time will be reduced and would result in more of the stockpile funds going for purposes other than for stockpile improvements. Would you comment on that point?

Mr. MITCHELL. Yes, sir, Senator, I would like to ask Mr. Ed Zabrowski, who is assistant director for our stockpile programs to answer that, if he would.

Mr. ZABROWSKI. Senator, the 2-year—the ability to have moneys in the fund for 2 years without being appropriated, plus the 5 years once appropriated, to take action, gives us a total period of 7 years in which to move. This has been under discussion for a long period of time in the administration and we sincerely believe that this is at least adequate time in which to make our market moves with the fund.

On the other hand, over time, as the fund begins to sort of—if I may use the phrase run out of steam, while we are acquiring considerably more than we will be taking in to the fund, and the program eventually comes to an end, we hope, we wouldn't want moneys lying around unutilized that could have other higher priorities in defense, or other programmatic requirements within the administration.

Senator THURMOND. Is it not a fact that marketing changes could require delays of great length in acquiring commodities?

Mr. ZABROWSKI. Yes, sir; it could require great lengths. We would believe, however, under recent behavior and business conditions in the last 20 or 25 years that somewhere within the 7-year period one would be able to enter the markets and acquire the materials needed.

Senator THURMOND. What would you say is the practical difference between the 2- and 3-year time requirement as it applies to acquisition of new commodities?

Mr. ZABROWSKI. It is not a major difference, sir. As I said in one of my earlier responses in the course of our discussions, we believe that 2 years should be adequate time for unappropriated moneys to be programed out and plans presented to the authorizing committees to get the program moving. Once appropriated, you have the other 5 years, giving us a 7-year total in all, and that should be plenty of time for our operational program managers to do their job.

Senator THURMOND. Mr. Mitchell, what are your views on obtaining a highly professional recommendation of what should be in the stockpile and in what quantities?

Mr. MITCHELL. Senator, I'm not sure I understand the purpose of your question. Could you repeat that?

Senator THURMOND. What are your views on obtaining a highly professional recommendation on what should be in the stockpile and in what quantities? In other words, I'm asking you if you think that a person with high professional qualities and information and knowledge on the subject could be given consideration, would it be helpful to you and the others in this work?

Mr. MITCHELL. I think certainly, Senator, hopefully the process that we have used and will use in the future, not only with using the appropriate Federal agencies, but also outside groups such as advisory committees that would be composed of both industry representatives, academic representatives, interest group representatives—I think with both of those types of input, we would have the expertise that the Senator speaks of.

I think we have that today, but I think under this bill, and in fact, this year for the first time we set up an advisory group composed of industry representatives and outside academic experts, brought them in and asked them what they thought about our stockpile disposal process, and got their recommendations and passed those on to Mr. Markon.

So yes, I agree with the procedure.

Senator THURMOND. How do your commodity recommendations for fiscal year 1980 differ from those of last year?

Mr. MITCHELL. Mr. Zabrowski, would you like to answer that?

Mr. ZABROWSKI. In terms of materials, nearly all the materials are the same. Because of movements in the markets, we had to withdraw our present plans for a few of the materials and substitute other high-priority materials therefor.

In terms of dollar volume, the 1980 plan is approximately the same as the 1979 plan. Last year when we talked, we were talking in terms of both 1978 and 1979 so the total dollar figures that were exhibited were somewhat higher than what you see this year. But on a 1-year fiscal year basis, the amounts are approximately the same, sir.

Senator THURMOND. Do you feel that all the major commodity changes will be forthcoming in the next several years?

Mr. ZABROWSKI. Oh yes, sir, not only in terms of what we plan to acquire for the stockpile for a period of time, but our mix of planned acquisitions will have to change with changes in our own business conditions or worldwide economic and political conditions.

Senator THURMOND. I am in another committee and I just have four more questions here that I would like to propound to Secretary Church.

Secretary Church, what do you see as the practical effect of the barter provision of this bill?

Mr. CHURCH. We consider it a fine provision of the bill which allows us to move priority materials into the stockpile without the expenditure of significant taxpayer funds, and we highly applaud it.

Senator THURMOND. Mr. Secretary, do you have any reason to believe there is a great interest in a barter program and it could result in significant agreements?

Mr. CHURCH. We are certainly interested in the barter program and have highly endorsed it. We think it will lead to programs very important to our national defense needs.

Senator THURMOND. What are your views on the transaction fund as established in the Senate bill?

Mr. CHURCH. We think it is a very fine program but have deferred to the Federal Preparedness Agency with regard to some technicalities concerning the duration of the fund. We could live with either the 2- or 3-year proposal, strictly from a parochial defense standpoint. We think the general concept is excellent. While we defer to the Federal Preparedness Agency for the specific problems with respect to the exact number of years, but we like the idea and we think it should move forward in any case.

Senator THURMOND. Secretary Church, I am concerned relative to the differences in opinion as to what should be in the stockpile and in what quantities. This appears to change with the change of administrations. Do you have any idea how we could get a highly professional recommendation on this and exclude it from political considerations?

Mr. CHURCH. Of course. In 1975 the Defense Department contracted with a Federal contract research center to study this question. At that time we also participated in an interagency review of stockpile policy at the direction of President Ford. Under President Carter the elements of that interagency study were reaffirmed, and we supported those findings.

In effect, both administrations have fully supported the same series of findings. Furthermore, we have an annual materials plan and participate in an annual materials plan steering committee. As the situations in the world change, economically, politically, and defensewise, they are reflected in the annual materials plan through the participation by DOD and other Federal agencies in the steering committee.

Senator THURMOND. Thank you very much.

Mr. Chairman, Senator Proxmire is here and I am due in another committee, but I'm anxious to hear what he has to say so I will try to wait a few minutes.

Senator HART. Thank you very much. We are pleased to have the Senator from Wisconsin here with us, he has had an interest and concern in the stockpile issue over the years and has been a constant source, I think, of constructive criticism of policies, and not just criticisms but proposals of his own.

Senator, we are pleased to have you with us and we look forward to hearing the remarks you have.

STATEMENT OF HON. WILLIAM PROXMIRE, U.S. SENATOR FROM THE STATE OF WISCONSIN

Senator PROXMIRE. Thank you very much.

Senator Thurmond, I'd appreciate very much your staying, but I would understand if you have to leave at any time during the presentations and the questions the chairman may have of me.

I want to thank you for this opportunity to express my views. Rather than read my prepared statement, which is a little too long, I would like to submit it for the record and summarize the major points which I have before me here.

Senator HART. Without objection, the statement will be inserted in the hearing record.

[The prepared statement of Senator Proxmire follows:]

PREPARED STATEMENT OF SENATOR WILLIAM PROXMIRE

The Chairman and members of the subcommittee, thank you for providing me this opportunity to express my views on S. 290, the Strategic and Critical Materials Stock Piling Revision Act of 1979. I endorse Chairman Hart's effort to update this law and to insure a stockpile which meets our national security needs. However, I would suggest three amendments.

My first amendment would limit stockpile coverage to military and essential civilian requirements. This coverage would save \$6.3 billion (June, 1977 prices) by reducing the bottomline cost of the stockpile by approximately 54 percent. This smaller stockpile would still provide ample national security protection both as a deterrent to potential adversaries and as insurance for a strong defense industrial base.

At a cost of \$5.3 billion (June, 1977 prices) the strategic stockpile would meet all military and essential civilian needs for the first three years of a major war preceded by a protracted period of industrial mobilization. Adequate resources would be guaranteed to meet all military, food, clothing, shelter, health care, basic transportation, safety, investment, export, and import requirements. In other words, the stockpile would guarantee the sectors in our economy essential to the war effort. It would guarantee our ability to wage a major conventional war over a prolonged period.

The current stockpile policy extends coverage beyond military and essential civilian needs to include general civilian consumption. This expanded coverage more than doubles the cost of the stockpile from \$5.3 billion to \$11.6 billion (June, 1977 prices).

Eighty percent of this \$11.6 billion cost is geared to civilian consumption during wartime. Eighty percent of the National Defense Stockpile is intended for civilian use. This allocation of stockpile resources is clearly misdirected. My amendment to limit the stockpile to military and essential civilian needs would correct this situation.

A stockpile limited to military and essential civilian needs would provide more than adequate protection against all but the most extreme contingency—an extended European war preceded by extensive industrial preparation. In the event of this extreme situation, our industrial capacity would be stretched to its utmost. Materials for the military and essential civilian sectors would be guaranteed by the stockpile reserves; however, nonessential sectors would suffer some materials shortages. Consumption of nonessential items would necessarily be cut back. And some nonessential industries would shut down causing unemployment. We can expect no less from our involvement in a major European war.

Involvement in such a war would cause some disruption regardless of our industrial preparation and stockpile reserves. We simply cannot afford to maintain a fully-mobilized economy. Nor can we afford to hold an unlimited supply of materials in our defense stockpile. Instead, we must weigh the risks of being "caught short" in the event of major war against the costs of various stockpile alternatives.

By limiting stockpile coverage to military and essential civilian needs my amendment brings the costs of the stockpile into closer balance with the risks of involvement in a drawn-out conflict. The remote possibility of our involvement in such a conflict and the limited national security advantages of guaranteeing a certain level of nonessential civilian consumption certainly do not justify a \$6.3 billion increase in stockpile expenditures.

During the Ford administration review of stockpile policy, the Office of Management and Budget, the Treasury Department, and the Council on International Economic Policy all arrived at this same conclusion—that the stockpile should provide for military and essential civilian needs only. They all felt that a smaller, less costly stockpile would provide more than adequate national security protection and that the provision for general civilian consumption is an expensive frill.

Since the specific agency comments in the Phase II stockpile report are classified, I will not quote them in this statement. However, I will draw the subcommittee's attention to a report I transmitted to Chairman Hart in January concerning suggested amendments to H.R. 4895, as reported last Congress by the

Senate Armed Services Committee. This report contains these comments which explain each agency's opposition to the provision for general civilian consumption.

The position of these three economic planning agencies refutes the argument iterated by Department of Defense and Federal Preparedness Agency representatives that provision for general civilian consumption is necessary to maintain a sound wartime economy. OMB and the Treasury certainly have more credibility in economic matters.

Obviously, provision for general civilian consumption would ease the strain on a wartime economy—more is almost always better. Yet, in this case, more simply costs too much and provides too little in terms of increased national security.

DOD and FPA representatives also argue that the general civilian tier provides an extra degree of protection against potential shortages in the military and essential civilian tiers. True, the inclusion of the general civilian cushion does lower even further the risk of shortfalls in the higher tiers. However, current stockpile planning already allows very little risk in computing military and essential civilian requirements. And the marginal reduction of risk resulting from inclusion of the general civilian tier does not justify a doubling of costs.

In addition, the stockpile assumptions about a long war and a pre-war industrial mobilization period provide extra protection against all but the most extreme war scenario. For instance, the pre-war mobilization assumption inflates stockpile goals by roughly one-third. If we were to enter a conflict without having mobilized industry extensively beforehand, this "extra" third would provide a considerable hedge. Similarly, the three-year assumption provides more than adequate protection against any conflict of shorter duration.

While the enormous cost savings are reason enough to limit the stockpile to military and essential civilian needs, other benefits resulting from a reduced stockpile might also be cited:

(1) A smaller stockpile would better insure rapid acquisition of materials needed to meet our most pressing national security needs. Events during the last Congress suggest that lower-priority items may be placed above higher-priority items despite the President's policy regarding stockpile priorities. If the goals were limited to high-priority materials—those needed for the military and essential civilian tiers—funds to acquire materials could not be diverted to lower-priority categories.

(2) A smaller stockpile with smaller goals is less subject to manipulation for economic and budgetary purposes. The Chairman is undoubtedly aware of a number of instances where presidents have misused the stockpile for these purposes. Likewise, special interests in Congress have attempted to manipulate stockpile acquisitions and disposals for the benefit of certain industries. Such instances are made possible in part by the overwhelming amounts of materials held in the stockpile and the enormous unmet goals. Smaller stockpile holdings and smaller goals would eliminate much of the room for abuse.

(3) A smaller stockpile would cause less market disruption. The mere existence of a large stockpile greatly affects the economic decisions of market participants. For instance, much-needed expansion of tin production capacity over the past several years has been discouraged by the threat of tin disposals from the National stockpile. As a result, a world-wide tin shortage currently exists and the price of tin has tripled since 1973. Conversely, large stockpile acquisitions could cause the creation of excess capacity. Moreover, the threat of stockpile actions frequently creates havoc in the commodity markets. These market impacts are mainly a function of the stockpile's size. A smaller stockpile would have much less impact on commodity markets.

(4) Finally, a smaller stockpile is a more realistic and attainable goal. There is little point in dealing with goals which cannot be achieved for 15 to 20 years. Such long-range projections add nothing to our current level of security. A smaller stockpile, geared to our most pressing security needs, could be attained over a much shorter time frame.

Thus, a smaller stockpile, one based on military and essential civilian needs only, would result in several important benefits at little or no cost to our national security. In fact, the smaller stockpile could even result in an increased level of security by facilitating the rapid acquisitions of high-priority materials—materials needed to meet the most threatening military contingencies.

In any case, a stockpile limited to military and essential civilian requirements would cost the American taxpayer less than half as much as the current policy; it would have much less impact on commodity markets; and it would be less susceptible to economic manipulation; and it would better reflect our most pressing

national security needs. And, most importantly, it would guarantee a strong defense industrial base in the event of a major conventional war.

My second amendment would, on the one hand, limit the President's authority to release stockpile materials by permitting such release only during a time of declared war or national emergency and, on the other hand, authorize the President to dispose of excess stockpile materials in limited amounts without further congressional authorization but only after informing Congress 90 days in advance. The first section of this amendment would constrain the President's ability to manipulate the stockpile for economic purposes while the second section would increase the President's authority to dispose of excess stockpile materials.

Broad presidential authority to dispose of stockpile materials has led to past abuses and would permit similar abuses in the future. By limiting disposal authority, this amendment would also limit the potential for abuse.

The stockpile is not an expedient, it is a resource of last resort. Therefore, its limitation to times of declared war and national emergency is consistent with its underlying purpose. This is necessary protection against economic manipulation of stockpile resources. In addition, it better insures the availability of these resources during a crisis by preventing their disposal in non-crisis situations.

A similarly-restrictive provision was included in Senator Hart's bill, S. 2575, but was amended in response to the Administration's complaint that it was too restrictive. It is not too restrictive. It gives the President a free hand during a war or national emergency. Short of these contingencies the President's authority should be constrained to prevent future abuses. The President can always come to Congress in situations short of a national emergency.

On the other hand, the President's authority to dispose of excess materials from the stockpile should be increased. The amendment I am offering would do just that to a limited degree. It would authorize the President to dispose of excess materials but only in relatively small amounts and only after notifying Congress ninety days in advance.

The stockpile currently includes billions of dollars worth of excess materials, only a portion of which has been authorized for disposal. By authorizing limited disposals of additional materials, this amendment would facilitate the reduction of this excess and greatly reduce stockpile holding costs. (These costs were described at length by Congressman Philip Gramm and a fellow economics professor from Texas A&M University during hearings before the Senate Banking Committee last November. Their work is presented in a monograph entitled "Does Resource Conservation Pay?" I hope a summary of this monograph can be included in the hearing record. See p. 25.)

Experience demonstrates that determined special interests and a handful of congressional spokesmen can frequently prevent disposal of excess materials. By preventing prompt disposal of these excesses, these interests have greatly increased stockpile costs. This amendment would reduce the power of these special interests to obstruct timely disposal of stockpile materials.

Primary responsibility to authorize disposals would still rest with Congress. This provision is intended to apply to exceptional cases where large excesses exist but congressional disposal authorization has been prevented.

Silver, tin, and antimony would be most affected if this amendment were adopted and if no disposal authorization for these materials were forthcoming from Congress. The following table summarizes the situation for each.

Excess	Value in millions	Monthly maximum disposal under Proxmire amendment
Silver..... 139,500,000 Troy ounces.....	\$729.7	1,500,000 Troy ounces.
Tin..... 168,160 Long tons.....	2,200.0	630 Long tons.
Antimony..... 20,600 Short tons.....	146.0	360 short tons.

From the numbers in the right-hand column one can see that disposal authority is restricted to relatively small amounts. By way of comparison, last year the Administration requested authority to dispose of 62,500,000 TrOz of silver, 25,000 lt of tin, and 2,500 st of antimony.

In addition to cost savings, this amendment would have a beneficial impact on commodity markets by reducing the enormous price volatility caused by wide fluctuations in levels of disposals. Disposals would become much more predictable and less subject to the vagaries of the legislative process. And materials producers and consumers could make their economic decisions in an atmosphere less clouded by speculation about impending stockpile actions.

Finally, while this amendment does give the President additional discretionary power with regard to stockpile disposals, it restricts this power by requiring prior notification of Congress and by limiting disposals to relatively small amounts. These limits, in addition to the revolving fund in Treasury, should greatly reduce the potential abuse of this presidential power.

My third amendment would require annual interest payments from the stockpiling agency to the Treasury based on the current market value of materials in the stockpile. A similar provision currently applies to materials held in the Defense Production Act Inventory.

It costs the Federal government money to finance existing stockpiles, and these costs should be fully reflected in the appropriate agency budget. By reflecting the full costs of maintaining the inventory—not only maintenance and disposal but also financing costs—this provision would emphasize the need for prompt disposal of surplus materials. This amendment would affect internal government accounting only and would have no impact on taxes or the budget deficit.

I have included the text of this amendment along with the other two at the end of this statement.

In conclusion, I urge the Subcommittee to consider each of these amendments. The first amendment would insure a strong defense industrial base at less than half the cost of the current policy. It would meet all military and essential civilian requirements during the first three years of a major war. The second amendment would prevent presidential manipulation of the stockpile for economic and budgetary purposes. In addition, it would facilitate the disposal of excess stockpile materials when Congress has failed to authorize timely disposals. Finally, the third amendment would identify a hidden, but substantial cost of stockpiling by requiring the stockpiling agency to pay an annual financing charge to the Treasury.

Again, I wish to thank Chairman Hart and the members of the Subcommittee for providing me this opportunity to express my views on S. 290.

PROXIMITY AMENDMENT NO. 1 TO S. 290

Amendment to section 2 and section 13

On page 2, line 11, delete "industrial,".

On page 14, line 22, delete "industrial,".

On page 15, after line 3, add:

"(3) The term 'essential civilian needs' means non-military needs which have a direct relationship to the military effort or which are basic to the well-being of the civilian population and which cannot be provided through substitution without a significant loss of utility."

Explanation: S. 290 defines "strategic and critical materials" to include "materials that (A) would be needed to supply the military, industrial, and essential civilian needs of the United States during a national emergency. . . ." Amendment No. 1 would delete "industrial" from this definition. In effect, this would eliminate the "butter" from the current "guns and butter" stockpile policy. The provision for non-essential goods and services adds \$6.3 billion to the cost of the stockpile. It is felt that our national security is well-served by a stockpile which is limited to military and essential civilian needs. (The definition of "essential civilian needs" is consistent with its current usage by the Federal Preparedness Agency.)

PROXIMITY AMENDMENT NO. 2 TO S. 290

Amendment to section 7

On pages 9 and 10 delete the entire text of subsection 7(a) and insert:

"Sec. 7(a) Except as otherwise provided in this Act, materials acquired under this Act may be released for use, sale, or other disposition only on the order of the President or any officer or employee of the United States designated by the President to issue orders of release under this section—

"(1) In time of war declared by the Congress or during a national emergency proclaimed by the Congress or the President, if the President or his designee determines the release of such materials is required for purposes of the national defense; or

"(2) If (A) such materials are determined excess to stockpile requirements, (B) Congress has been notified 90 days in advance, and (C) the amount of any given material to be disposed of in any given month does not exceed the lesser of either (1) five percent of the stockpile excess of that material or (2) one percent of the average annual domestic consumption of that material computed over the previous three years.

Explanation: Subsection 7(a)(1) would reduce the potential abuse of the stockpile by the President by limiting the use of the stockpile to times of declared war and national emergency. Subsection 7(a)(2) would permit more rapid and dependable disposals of excess materials in cases where special interests have prevented timely disposal authorizations by Congress.

PROXIMATE AMENDMENT NO. 3 TO S. 280

Amendment to section 5

On page 6, line 20, strike the period after "stockpile" and insert "and payment of interest under subsection 5(d)".

On page 6, after line 23, insert:

"(d) Interest shall accrue on the current market value of the materials in the National Defense Stockpile commencing with the fiscal year beginning October 1, 1978. At the close of each fiscal year there shall be deposited into the Treasury as miscellaneous receipts, from any amounts appropriated under subsection 5(c), an amount which the Secretary of the Treasury determines necessary to provide for the payment of any interest accrued and unpaid under this section. The rate of such interest shall be determined by the Secretary of the Treasury, taking into consideration the average market yield during the month preceding each fiscal year on outstanding marketable obligations of the United States with one year remaining to maturity."

Explanation: A similar provision currently applies to materials held in the Defense Production Act Inventory. It costs the Federal Government money to finance existing stockpiles, and these costs should be fully reflected in the appropriate agency budget. By reflecting the full costs of maintaining the inventory—not only maintenance and disposal but also financing costs—this provision would emphasize the need for the prompt disposal of surplus materials. This amendment would affect internal government accounting only and would have no impact on taxes or the budget deficit.

SUMMARY OF MONOGRAPH—DOES RESOURCE CONSERVATION PAY?

By Gerhard Anders, W. Philip Gramm, and S. Charles Maurice

I. INTRODUCTION

Conservation of natural resources and resource stockpiling have recently become extremely important issues. All aspects of the resource conservation question are being hotly debated not only in academic circles but also in the popular media. Of course, the topic of natural resource conservation is not new. Conservation has received a certain amount of attention throughout history. At the end of the nineteenth century ardent conservationists were extremely vocal and had a significant impact on public policy in the United States. Many writers thereafter, both in the popular and in the academic press, have published extensively in the area of conservation. The emphasis in most cases throughout the period has been that natural resources were being exploited far too rapidly and government must intervene in order to save resources for future generations.

Within the past few years the interest in the conservation and exploitation of natural resources has increased astonishingly. The recently renewed interest is due to several factors: Doomsday theories, recent oil embargos, the drive for self sufficiency in certain resources and so on. Many conservationists emphasize that there must be control of resource extraction or future generations, lacking natural resources, will be impoverished. They argue that government should consider delaying extraction in order to make future generations better off.

Seldom is anything learned from history because people tend to view each problem as being unique and without precedent. In the cases of production holdbacks, stockpiling and resource conservation we have an excellent historical case study in the conservation movement in the United States during the early part of the twentieth century. The study of the conservation era can shed considerable light on the public policy debate regarding stockpiling and resource holdbacks as well as long-term conservation. Specifically we can analyze empirically the costs of holding back resources from production during the twentieth century. In this paper we shall attempt to measure whether or not long-term resource conservation has, in fact, made future generations better off economically. In such a framework the historical benefits and costs of resource conservation can be assessed.

The conclusions of this study, which follow directly from simple economic analysis and from the existing data on resource prices in the twentieth century, are largely in contradiction with the general opinion concerning conservation of depletable resources. Our conclusions are, first, that at any time during the twentieth century enforced long-term conservation or production holding of mineral resources would have been a poor economic decision, not only for the generation giving up the consumption of the conserved resources but also for the later generation that did obtain the use of the resource. Secondly, we conclude that whatever justifications may be used for stockpiling, such as military or political considerations, the exhaustion of resources has historically not been a valid justification.

II. THEORY OF EXTRACTION HOLDBACKS AND STOCKPILING

In order to examine the costs and benefits of government short-term or long-term resource holdbacks, we will begin our analysis with a study of why private firms might follow such a policy. We can then easily adapt the theory to fit governmental decisionmaking.

Private owners or lessors of a non-renewable resource deposit would have two economic reasons to postpone exploitation of the deposit or to curtail extraction significantly. The first reason is if the firm has significant monopoly power in the relevant mineral; that is, if the firm's rate of output has a substantial effect on the world price of the resource, it may withhold extraction to increase the market price. While exploitation of monopoly is a reason why a firm might hold back output, this type of inducement is not the argument generally given in recent discussions of stockpiling and is certainly not an argument for long-term conservation. Neither is it the point in which we are interested here.

The theory explaining why a firm would withhold extraction or reduce the rate substantially is really quite simple. If someone owns a sterile asset worth one dollar and the relevant rate of interest is ten percent, that person should hold the asset until the next period if the price of the asset is expected to rise above \$1.10. If the price expected in the next period is less than \$1.10, the asset should be sold, because the value of a dollar invested now at the market rate of interest will be \$1.00 in the next period. To generalize, a business would withhold the sale of a sterile asset, including a mineral, if it expected the value of the asset to increase at a rate greater than the relevant rate of discount. Otherwise, the business would maximize wealth by selling the asset and investing the returns. This analysis holds whether we are discussing the decision to withhold an entire deposit or to increase or reduce the rate of extraction.

Let us emphasize in the case of minerals that this analysis applies to the price of the resource less the cost of bringing the resource to market, rather than to the market price of the resource alone. A firm may well postpone profitable extraction even though the market price of the resource is expected to remain constant, if the cost of extracting and selling is expected to decrease sufficiently—a "sufficient" decrease being defined as a decrease at a rate absolutely greater than the rate of interest. Of course, when cost generally varies in about the same way as price, one can concentrate exclusively upon price variations when analysing stockpiling decisions. For example, if price is expected to increase by ten percent, so long as cost increases by ten percent also, profit will increase by ten percent. Therefore, when analyzing the economics of selling now or postponing sales, one is justified in looking at the variation in selling price when price and cost generally vary together.

Thus the most relevant test of the economic feasibility of resource stockpiling is a comparison of the discounted (at the relevant interest rate) difference between price and cost in some future period with the same difference in the present period. If the discounted future difference exceeds the present difference, production of the resource should be withheld. If the opposite is the case production should occur in the present. The generalized test would be

$$\begin{aligned}(P_t - C_t)/(1+r)^t &< 1 \text{ sell} \\ (P_0 - C_0) &> 1 \text{ hold}\end{aligned}$$

where P_0 and P_t are respectively the price in the present period and the price expected in the target sale year t . C_0 and C_t are respectively the cost in the present period and the cost expected in the t^{th} period; r is the relevant rate of discount.

The above theory applies not only to businesses, which are interested in profits, but to government as well.

In the first place, whatever a government wishes to do and whatever the motivation, the cost to society of carrying out the decision must be considered or taken into account when making decisions. For example, increasing welfare benefits has costs to society, even though the increase in benefits is not motivated purely on economic grounds. The same thing applies to increases in the military budget or other programs carried out by governmental agencies. Even though increasing the military budget may be carried out for other than purely economic reasons, the cost of the increased budget must be considered and compared with alternative uses of the funds. Thus any project of government involves a cost, which is the loss of the resources in alternative uses. This cost is the opportunity cost of the project.

The same type of cost consideration must also apply to natural resource stockpiling or conservation, even though holding resources in the ground rather than extracting them involves no out-of-pocket costs to the government treasury and even though the delayed extraction is ordered from purely non-economic motivations. No matter what the motivation, economic or otherwise, the decision to hold resources involves opportunity costs and these costs may not be inconsiderable.

If the value of the resource increases less rapidly than the rate at which the investment of the value of the resource increases, society loses economically by withholding extraction. That is, the value of the resource must increase at a rate greater than the relevant rate of interest or there is a social cost involved. The difference between the rate of increase in the value of the resource and the interest rate is the cost to society of withholding the extraction. On the other hand, if the value of the resource conserved grows at a more rapid rate than the relevant rate of interest over the time period of conservation, society is in fact better off economically for having postponed exploitation of the resource. If these circumstances occur, society benefits economically from a withholding action, which may have been motivated by non-economic considerations.

In conservation decisions, government should recognize that the true cost of withholding extraction of resources is as real a cost as the price of a good purchased, even when the motivation for conservation is non-economic. This real cost is all too frequently neglected in the conservation literature and in discussions of the desirability of resource stockpiling.

The key variable in the process of analyzing the decision to delay extraction is the break-even price, which is the value in some future year that could be obtained from investing the price of a unit of the resource in the present year at the relevant rate of interest. Even though the motive for stockpiling is for reasons entirely divorced from economic interests, the break-even price gives a good indication of the cost of stockpiling. In any year the ratio of the break-even price to the actual price indicates whether or not society does or does not benefit economically from the stockpiling.

The second reason for applying economic analysis to the governmental decision to withhold extraction of resources concerns long-term resource conservation in order to make future generations better off than they would be otherwise. If the real value of the resource appreciates less rapidly over time than the relevant rate of interest, the future generation would be made better off economically if the philanthropic generation exploits the resources and invests the return at the market rate of interest. On the other hand, if increasing scarcity causes the value of the natural resource to appreciate more rapidly than the interest rate, the later generations benefit more by having inherited the resources in the ground. Again when a society considers conservation as a method of endowing future generations, it cannot neglect the cost of the endowment; that cost is the lost opportunity of investing the return from the resources at the going rate of interest. The endowing generation bears the cost of foregoing income from using the resources. The endowed generation bears a cost when it could have been made better off if the previous generation had exploited the resource and invested the returns in capital for the later era. Which program would leave future generations better off—leaving resources or exploiting the resources and investing—is an economic question that can be answered empirically.

To summarize, the value of a natural resource in the ground in any period is the price at which the resource would sell minus the cost of extraction. If the decision criterion for conservation is to make some future generation better off than it would otherwise be, the decision to force production holdbacks would be uneconomical when the value of the conserved resources increases at a rate less rapid than the relevant rate of discount. Otherwise, as noted, exploitation and investment of the returns would maximize the wealth of the future generation. We will

concern ourselves here only with the economic feasibility of conservation or stockpiling decisions regardless of motivation, in order to isolate the social costs of such decisions.

III. STATISTICAL ANALYSIS

Let us examine the historical facts concerning resource prices, using 14 depletable resources for which price data were available throughout most of the 20th century. These resources are listed in Column 1 of Table 1. The purchase price of 11 of the resources in the U.S. in 1900 is shown in Column 2. In the case of three resources, crude petroleum, lime, and magnesium, price data were not available until later years, noted at the bottom of the table. In these cases the prices in Column 2 are prices in the first year in which consistent data were available. Column 3 lists the average price of each resource in 1975.

The following types of tests are carried out. Using four rates of interest or rates of discount, (1) the rate of return on AAA bonds, (2) the average yearly rate of return in manufacturing before taxation, and (3) two measures of a pure interest rate (% of change in CPI plus 2 and plus 3 percent), we calculate the value in 1975 that could have been realized by investing the value of a unit of the resource in 1900 (or in the first year for which data are available). The costs or benefits of conservation or production holdbacks can be measured by subtracting the value of the investment from the price of the resource in 1975. If the 1975 price of the resource exceeds the value of the alternative investment that could have been made by selling the resource in 1900 and investing the proceeds of the sale at the going interest rate, then society clearly benefits from conservation as a method of transferring wealth from one generation to another. If on the other hand the value of the alternative investment that could have been made by producing and selling the resource exceeds the 1975 market price, conservation of the resource in question was not the most efficient method of wealth transfer and cost was imposed on society by the conservation decision.

Table 1 shows the break-even price for the 14 resources for the 4 interest rates. The break-even prices indicate the value in 1975 that would have been obtained by selling the resource in 1900 and investing the proceeds at the given interest rate. (We used price rather than price less extraction cost because our data, not included here, indicate these varied in the same way.)

The relevant question is whether resource prices increased between 1900 and 1975 more or less than the value that could have been obtained by investing the proceeds from the sale of the resource.

Columns 4a, 5a, 6a, and 7a show the values that would have been obtained by investing the sales price of the resource in question in 1900 at the AAA corporate bond rate, the percentage change in the consumer price index plus two percent, the percentage change in the consumer price index plus three percent, and the before-tax rate of return in manufacturing, respectively. Columns 4b, 5b, 6b, and 7b show the percentage of respective yields on investment at the various interest rates relative to the purchase price in 1975.

In no case for any of the 14 depletable resources would stockpiling from 1900 through 1975 have been a viable economic alternative to simply investing the proceeds of the sale of the exploited resources in 1900 at the AAA corporate bond rate. The average value of the investment obtained by exploiting the 14 resources in 1900 and investing the proceeds of their sale in AAA corporate bonds was 733 percent of the sales price of the same resources in 1975. Of the 14 resources, in only two cases did the value of the investment fail to exceed 200 percent of the value of the resource in terms of its 1975 sale price. These two resources were coal and crude petroleum, both of which experienced a rapid acceleration in price between 1973 and 1975. Even so, the value of a AAA corporate bond investment of the proceeds of selling coal in 1900 was 159 percent of the sales price of coal in 1975. The value of the investment that could have been obtained in AAA corporate bonds by selling crude petroleum in 1905, the first year for which price data are available on a consistent basis, was \$14.30 a barrel which was 191% of the average market price of crude petroleum in 1975. The results shown in Columns 5a, 5b, 6a, and 6b, using "pure" interest rates, are quite similar.

TABLE 1.—PURCHASE PRICE IN 1900, SALE PRICE IN 1975, AND BREAK-EVEN PRICES IN 1975 EMPLOYING 4 PERCENT INTEREST RATES AND PERCENT OF BREAK-EVEN PRICES IN 1975 SALE PRICES FOR 14 DEPLETABLE RESOURCES

Resource	Real break even prices									
	Purchase price		R=AAA		CPI+2 percent		CPI+3 percent		R=BTM	
	1900	1975	Dollars or cents	Per cent	Dollars or cents	Per cent	Dollars or cents	Per cent	Dollars or cents (×1,000)	Dollars (×1,000)
	(1)	(2)	(3)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)	(7a) (7b)
Aluminum.....	32.72	39.80	939.90	2,361	950.20	2,387	1,941.40	4,878	1,623.40	4,079
Bauxite.....	3.87	15.00	111.20	741	112.40	749	230.60	1,531	192.00	1,280
Coal.....	1.04	18.75	29.90	159	30.20	161	61.70	329	51.60	275
Copper.....	.17	.64	4.80	745	4.80	753	9.80	1,539	8.20	1,287
Crude petroleum.....	.62+	7.52	14.30	191	15.00	200	29.30	389	12.90	172
Gold.....	20.67	162.25	593.70	366	600.20	370	1,226.40	756	1,025.60	632
Iron ore.....	4.00	18.62	114.90	617	116.20	624	237.30	1,275	198.50	1,066
Lead.....	4.41	21.60	126.70	587	128.10	593	261.70	1,211	218.80	1,013
Lime.....	13.68	22.18	89.00	401	91.00	410	179.00	807	91.20	411
Magnesium.....	1.81+	.82	22.60	2,758	19.50	2,374	33.60	4,093	3.90	481
Nickel.....	27.00	210.50	775.60	368	784.10	373	1,602.00	761	1,339.60	636
Silver.....	61.33	443.00	1,761.70	398	1,781.00	402	3,638.90	821	3,042.90	687
Tin.....	30.00	346.00	861.70	249	871.20	252	1,780.00	514	1,488.50	430
Zinc.....	4.40	39.10	126.40	323	127.80	327	261.10	668	218.30	558

¹ Series begins in 1904, +1905, +1918.

Sources: Moody's, Bureau of Labor Statistics, Quarterly Financial Report for Manufacturing, Commodity Data Summaries, 1974, app. 1, Federal Reserve Bulletin, Minerals Yearbook, Statistical Abstract of the United States, Trends in Natural Resource Commodities. (Complete references available from authors.)

The largest discount rate employed was the before tax rate of return in manufacturing, which to some extent represents the investment opportunity cost of American business. This extremely high discount rate produced such large numbers that it was necessary to drop the last three zeros in Columns 7a and 7b. For stockpiling of crude petroleum between 1900 and 1975 to have been a viable alternative to investment at the before-tax rate of return on manufacturing, the price of crude petroleum in 1975 would have had to exceed \$12,900 a barrel. The break-even price of gold would have been over \$1 million an ounce. On average, the break-even price for the 14 depletable resources exceeded the market price in 1975 by 929,000 percent. Obviously, long-term stockpiling of depletable resources has not been a viable alternative to investment in American manufacturing during the 20th century.

The results of Table 1 cast grave doubts on the efficiency of long-term resource stockpiling for economic purposes. Clearly, during the 20th century, resource stockpiling over long periods of time has not been a viable alternative to investment at the AAA corporate bond rate if the objective of stockpiling was to increase economic welfare. When higher effective interest rates are employed, the results are even more overwhelming than those obtained with AAA corporate bond rates. This is not to say, however, that resource stockpiling with other economic motives may not have been efficient during the 20th century. It does, however, indicate the extremely high economic costs that were incurred by such action. Clearly, such costs must be weighed against non-economic advantages in order to determine the optimality of the decision.

The historical feasibility of short-term production holdbacks—periods of from 1 to 5 years—have also been calculated. Using all of the resources and the AAA bond rate, only 34 percent of the time during the 20th century would firms have gained by holding back production from one year to the next. The results are similar for the "pure" interest rates. When the before-tax rate of return in manufacturing is employed as a discount rate, in only 11 percent of the time would production holdbacks from one year to the next have resulted in an economic advantage for the decision maker.

Under uncertainty with randomly distributed expectations one might expect profits from short-term holdbacks about half the time and losses about half of the time, with the average returns from holdbacks being about zero. If firms would have gained from additional stockpiling or production holdbacks a very large percent of the time, one might deduce that private firms exploited the resources too rapidly from a social point of view. If, on the other hand, short-term holdbacks would have occasioned losses in a large majority of the periods, it would appear that the resources may have been extracted too slowly. Those who assert that a system that relies primarily on private firms uses up natural resources at a wasteful rate must defend the assertion on grounds other than historical data and economic analysis.

Let us re-emphasize in closing that governmental holdbacks, both long-term and short-term, can certainly be ordered for reasons other than economic. All we wish to show here is a method for estimating the social cost of such activities and some historical evidence of such cost.

Senator PROXMIRE. In general I endorse Senator Hart's effort to update this law and to insure a stockpile which meets our national security needs. However, I would suggest three amendments. The first amendment would limit stockpile coverage to military and essential civilian requirements. It would save \$6.3 billion at June 1977 prices, and we estimate probably as much as \$8 billion at present prices.

Because there has been such a change, it would reduce the cost of the stockpile by about 54 percent. That smaller stockpile would still provide an ample measure of national security protection.

The current stockpile policy covers general civilian consumption as well as military and essential civilian needs. It would cost \$11.6 billion in June 1977 prices. My amendment would reduce this figure to \$5.3 billion.

Eighty percent of this \$11.6 billion cost is geared to civilian consumption during wartime. Eighty percent of the national defense stockpile is intended for civilian use. Such an allocation of stockpile resources is clearly misdirected.

My amendment to limit the stockpile to military and essential civilian needs would correct this situation.

Adequate resources would still be guaranteed to meet all military, food, clothing, shelter, health care, basic transportation, safety, export and import requirements.

By limiting stockpile coverage to military and essential civilian needs my amendment brings the cost of the stockpile into closer balance with the risks of involvement in a drawn-out conflict. The remote possibility of our involvement in such a conflict and the limited national security advantages of guaranteeing nonessential civilian consumption do not justify a \$6.3 billion increase in stockpile expenditures.

During the Ford administration review of stockpile policy, the Office of Management and Budget, the Treasury Department, and the Council on International Economic Policy all arrived at this same conclusion. They all felt that a smaller, less costly stockpile would provide more than adequate national security protection and that the provision for general civilian consumption is an expensive frill.

Since the specific agency comments in the phase II stockpile report are classified, I will not quote them in this statement. However, I will draw the subcommittee's attention to a report I transmitted to Chairman Hart in January concerning suggested amendments to H.R. 4895, as reported last Congress by the Senate Armed Services Committee. This report contains these agencies' comments.

While the cost saving to the American taxpayer is reason enough to reduce the overblown stockpile goals, several other benefits would also result. These benefits are summarized in my prepared statement.

My second amendment would serve two purposes. First, it would limit the President's authority to release stockpile materials by permitting such release only during a time of declared war or national emergency. This would limit the President's ability to manipulate the stockpile for economic purposes. Second, it would authorize the President to dispose of excess stockpile materials in limited amounts after notifying Congress 90 days in advance.

Broad Presidential authority to release stockpile materials has led to past abuses and would permit similar abuses in the future. By limiting release authority, the first part of this amendment would also limit the potential for abuse.

A similarly restrictive provision was included in Senator Hart's bill, S. 2575, but was amended in response to the administration's complaint that it was too restrictive. It is not too restrictive. It gives the President a free hand during a war or national emergency. Short of these contingencies, the President should be prevented from future abuses.

On the other hand, the President's authority to dispose of excess materials from the stockpile should be increased. The amendment I am offering would do just that to a limited degree. It would authorize the President to dispose of excess materials but only in relatively small amounts and only after notifying Congress 90 days in advance.

The stockpile currently includes billions of dollars worth of excess materials, only a portion of which has been authorized for disposal. By authorizing limited disposals of additional materials, this amendment would expedite the sale of the large excesses and would greatly reduce the opportunity costs of stockpiling. These opportunity costs were described at length by Congressman Philip Gramm and a fellow economics professor from Texas A. & M. University during hearings before the Senate Banking Committee last November. Their work is presented in a monograph entitled "Does Resource Conservation Pay?" I hope a summary of this monograph can be included in the hearing record.

To demonstrate just how enormous stockpile opportunity costs are, let me quote Dr. Gramm's conclusions regarding aluminum. He points out that you could have bought 100 pounds of aluminum at \$32.72 in 1900. You could have sold it in 1975 in the studies completed at \$39.80. Now, if you invested that \$32.75 in AAA corporate bonds, it would have been worth \$933.90. If you invested in the Consumer Price Index plus 2 percent, it would have been worth \$950. The CPI plus 3 percent, it would have been worth \$1,941. If you could have obtained a before tax rate in manufacturing—that \$32.72 would have been worth over \$1,600,000.

Now, that is what we lose when we put it into stockpiles, sterilize it, and then have no opportunity for investing in our very productive industry. The difference between these figures and the \$39.80 price for aluminum in 1975 represents the opportunity cost of stockpiling aluminum. We are willing to incur this cost for that amount of aluminum which is necessary for our national security, but we should not be paying for excess aluminum or any other excess material. My

amendment would help reduce any excess and, thus, reduce the enormous opportunity costs.

Congress would still retain primary responsibility to authorize disposals. My amendment would only apply to exceptional cases where large excesses exist but congressional disposal authorization has been prevented.

My third amendment would require annual interest payments from the stockpiling agency to the Treasury based on the current market value of materials in the stockpile. A similar provision currently applies to materials held in the Defense Production Act inventory.

Mr. Chairman, unless we do something like this, there's no way we're going to discipline ourselves. We realize there's a cost. When we require an appropriation every year, then we're going to be reminded of the cost and there is going to be a clear incentive to make the savings, and they are savings.

It costs the Federal Government money to finance existing stockpiles, and these costs should be fully reflected in the appropriate agency budget. By reflecting the full costs of maintaining the inventory—not only maintenance and disposal but also financing costs—this provision would emphasize the need for prompt disposal of surplus materials. This amendment would affect internal government accounting only and would have no impact on taxes or the budget deficit.

I have included the text of this last amendment along with the other two at the end of the prepared statement.

In conclusion, I urge the subcommittee to consider each of these amendments. The first would save billions of dollars while still insuring a high level of national security. The second would prevent presidential manipulation of the stockpile for economic and budgetary purposes. It would, also, expedite the disposal of excess stockpile materials. And, the third would identify a hidden, but substantial cost of stockpiling.

I want to thank you again, Mr. Chairman, and I want to thank Senator Thurmond for so graciously waiting.

Senator THURMOND. I hate to leave but I have a committee meeting I have to attend.

Senator HART. Thank you, Senator Proxmire. As always, you have provocative thoughts and ideas. I have some questions about those.

I also welcome Senator Cannon who is here this morning, and I ask you do you, Senator, have any opening remarks that you want to make?

Senator CANNON. No.

Senator PROXMIRE. May I just say, Mr. Chairman, Paul Winslow is on the staff of my committee and he has done a great deal of detailed work on this and will be of help on this.

Senator HART. I have one philosophical question frankly that troubles me across the board about the way the Federal Government keeps its books. Why don't you offer a resolution that would require the Federal Government to do what most States do and all businesses that I'm aware of and that is to keep two sets of accounts, one for annual expenditures or expenses, and the other for capital investment? Most taxpayers in this country aren't aware of the fact that the Federal Government, in a rather archaic fashion, expenses everything it buys each year and about one out of every \$5 goes to what I think any sound even conservative normal businessman would call a capital

investment. Over \$100 billion in the fiscal 1980 budget is, I think almost everyone would agree, is a form of capital investment, rather than current expense.

Your testimony is premised on the fact that all costs are used—I use the term cost for the stockpile—are expenses. Isn't it true that in fact the stockpile is an asset and does represent an investment on the part of the American people, not only in its national security but in assets that may or may not depending on market conditions, appreciate in value, and shouldn't that be taken into account in a cost benefit analysis, instead of just a one-sided cost analysis of the sort your amendments presuppose?

Senator PROXMIRE. I agree wholeheartedly. The Morse amendment called for that and he is right. We deceive ourselves when we don't recognize when the Government, for instance, loans money on a mortgage which is repayable with interest, that it has an asset, an asset that ought to be reflected as such. That is, it is a capital investment. It is not an expenditure.

What I'm talking about here, however, is that we ought to realize that when we put our money into something which is as relatively sterile as a stockpile, the value may go up or it may go down. As I pointed out here in the case of aluminum, it might very well remain stable over a period of years. When the prices of other things are going up, we ought to realize precisely what we're doing. That is why I think the way to do it is to keep books that reflect that opportunity cost and reflect what the expense is.

If you or I had \$100,000 and we put it in some asset which bore almost no interest at all, I think we would realize or our wives would remind us that we were losing the opportunity to put it into an investment that would yield a return and give us an income. I think that is what the investment is I'm talking about here.

Senator HART. If it had a fairly sophisticated cost benefit analysis and justification for our national stockpile, how do you put a benefit of value on the national security?

Senator PROXMIRE. You can't. I agree with you wholeheartedly. When national security is the issue, then there's no question about it. We should play it safe and begin conservatively. That is why we include all the essential military purposes—all military purposes and all essential civilian needs. But, when you go on to say you are going to be able to keep the economy going in the same way, that's too much. There's a whale of a lot of fat in this economy. We found that out before World War II when we stopped the production of automobiles for virtually 4 years. We stopped the production of many other things and put that kind of production into military production. I think we could do that again.

I think the notion that we have to maintain the country in its fat and happy status that we have in peace and prosperity is something that is unrealistic. I think most people would feel that they have the patriotism to make the sacrifices that are necessary. We did before and we will again.

Senator HART. Don't most historical analyses of World War II include that one of the reasons winning that war took so long was that the American economy had to gear up, not only gear up but do so without some vital raw materials that they were accustomed to? I think the whole synthetic rubber industry was a product of that.

Doesn't it take years and years if you don't have the stockpile, to in effect devise the technological substitute for those raw materials which you are substituting?

Senator PROXMIRE. You're right. That is why when I say essential civilian needs I include transportation. I include the other essentials that are vital for the economy to be able to function effectively. I include the food. I include the shelter. I include housing. I include things of that kind. But I don't include the other kind of consumption which I think in wartime we could forego.

Senator HART. How would your amendment accommodate the vital industrial needs in a prolonged national emergency?

Senator PROXMIRE. As I say, we provide the stockpile in the areas that are listed here—" * * * guaranteed to meet all military, food, clothing, shelter and health care, basic transportation, safety, investment, export, and import requirements." So, all those are included in the stockpile we have for \$5.3 billion.

Senator HART. That, you believe, would accommodate the industry's—

Senator PROXMIRE. Absolutely.

Senator HART. I have some other questions on this and other amendments, but I'm going to yield to Senator Humphrey.

Senator PROXMIRE. Let me just answer a little further. Paul has given me something he's working on here and I would like to read it. It says, "no essential industrial production would be shortchanged, if general civilian consumption were not covered by the stockpile, all essential industrial categories are covered in essential civilian tier." I would draw the subcommittee's attention to supplemental information submitted by the FPA for our hearing on stockpiles last November. The information lists which major industrial categories are included in the essential civilian and general civilian tiers.

Senator HUMPHREY. Senator Proxmire, what are some of these commodities that are needed in the stockpile and what sort of products do these commodities—

Senator PROXMIRE. Let me ask Mr. Winslow to respond to that.

Mr. WINSLOW. That is classified, isn't it? Is that classified information?

Mr. ZABROWSKI. The list of commodities that are in the stockpile is not classified. The materials that we plan to acquire in any particular year are.

[Additional information follows:]

One of the materials which would be removed from the stockpile if the "General Civilian" tier were eliminated would be copper. The copper stockpile goal is concentrated in the General Civilian Tier because the defense and essential civilian needs of the economy use up most of the supply available from secure sources of the raw material.

The impact on the economy if copper were not available to meet austere civilian needs would be large. During the last three extended military conflicts the U.S. has participated in—World War II, the Korean War, and the Vietnam War—copper was in severe short supply even though the copper available exceeded peacetime rates.

To meet these shortages in World War II, all gold and silver mines were shut down in order that men and equipment could be transferred to the copper mines. Military personnel were also assigned to the mines. In 1943 pennies were made from steel. Throughout the war 600 million ounces of silver from the U.S. Treasury were used by the aluminum industry and the Manhattan Project as a substitute for copper in electrical transmission equipment.

During the Korean war Presidents Truman and Eisenhower released 260,000 tons of copper to meet the shortage, while President Johnson authorized the release of 550,000 tons of copper during the Vietnam war. This last release represented 25% of U.S. consumption during 1965 and 1966.

Other materials for which stockpile goals are also concentrated in the General Civilian Tier include: antimony, bismuth, lead, and zinc. Like copper these materials are pervasive throughout the U.S. economy.

In his testimony, Senator Proxmire has also referred to a paper by Congressman Philip Gramm and an economics professor from Texas A&M University as justification for charging interest on the market value of the stockpile. This paper correctly identifies that raw material purchases provide a very poor vehicle for one wishing to make long-term speculative profits. The fact that aluminum's price changed very little from 1900 to the end of the study period is a tribute to American industry's ability to realize economies of large scale production, to keep costs under control, and pass the savings on to the user. Senator Proxmire further correctly noted that much larger profits could have been made if one speculated in corporate stocks and bonds. However, the purpose of the stockpile is not to engage in speculative quests for profits; instead it provides the nation with critical raw materials during time of war. We cannot make aircraft out of stock certificates or feed and shelter the populace with dividend checks.

Instead of viewing the stockpile as a speculative investment—even though its market value has doubled during the past five years—it should be viewed as insurance. The potential benefits from this stockpiling far outweigh the cost of holding it. For example, in 1965 and 1973, quinine derived from trees grown in Southeast Asia, was in critical short supply. The military stocks of Malaria drugs, manufactured with quinine, were depleted. The stockpile was able to provide U.S. pharmaceutical companies with sufficient quantities of quinine so that deliveries of drugs to the military could be made on schedule.

It is clear from this example that the value of the quinine, in terms of lives saved and debilitating sickness avoided, was worth far more than the simple cost of the raw material. However, this "profit" can not be accurately measured in dollars and cents. The stockpile, like other defense assets, is designed to insure the security, health and productivity of the nation. If these assets happen to appreciate in value, as in the case of the stockpile, this becomes an ancillary benefit.

Mr. WINSLOW. He is in essence asking me which materials are included in the general civilian tier.

Mr. ZABROWSKI. No, by tier they're not classified. It is all acquisition.

Senator PROXMIRE. Over here he says they are.

Mr. ZABROWSKI. All right, yes, I'm sorry.

Senator HART. We can go into executive session and get that information if you like. What you are essentially asking, as I understand it, is what commodities in the so-called general civilian tiers that Senator Proxmire could do without, and we can't get an answer to that without possibly getting into some classified areas.

Mr. CHURCH. Mr. Chairman, the list of commodities is not classified. It is when they are categorized that we get into classified information.

Senator CANNON. Mr. Chairman, I don't think that is a classification. He is simply asking what materials in the stockpile you would propose to do without. There is nothing classified about that. Who made the remark that that is classified?

Mr. CHURCH. It is the categorization by tier which is classified, Senator Cannon.

Senator CANNON. He is not asking for categories. He said which materials.

Senator HUMPHREY. My question was leading to categorization. Rather than taking time, I will go into executive session with the gentleman in a moment.

I have no further questions at this time, Mr. Chairman.

Senator HART. I want it on the open record if we can. I am sure Senator Cannon would like to know what is classified and what is not. We have the list of commodities in the stockpile, which is a public document prepared by the GSA and available to everybody. Perhaps what gets classified is when we discuss these commodities as to the tiers and categories. So we will do it in executive session.

Senator HUMPHREY. All right.

Senator CANNON. I have a long list here. I would like to renew the question, then, as I understand it, and this is not classified, I'm sure.

What materials in the stockpile do you recommend that we get rid of, that we dispose of?

Senator HART. Without reference to category.

Senator CANNON. Without reference to category, what material?

Senator HUMPHREY. He is restating my question.

Mr. CHURCH. Maybe I could give you some help on that too, Mr. Senator. If you don't put the quantities in, I don't see that there is an objection.

Senator CANNON. What would classify the quantities?

Mr. CHURCH. It is the quantities within the category that makes the classification.

Senator PROXMIRE. In the case for most of these commodities that are listed here, the amount that is essential is either 100 percent or zero. It is not in all cases. Would it be classified if I say that none of it is essential? I can give them the whole list of categories.

Mr. CHURCH. I see no objection.

Mr. MITCHELL. No objection here.

Senator CANNON. This is an unclassified document and it has a listing of some 93 items that are in the stockpile in the inventory, the goals, the excesses or deficits in the balance of disposal authorizations for the basic stockpile materials.

It is obvious that Senator Proxmire is suggesting that a lot of these materials we should dispose of. What I would like to know from him is which ones does he recommend from this list that we can dispose of?

Senator PROXMIRE. They said we could tell them as long as we didn't mention the amount.

Mr. WINSLOW. It would be portions of most of the materials. It would be whatever is included in the general civilian tier. I'm sure the Armed Services Committee has the documents which indicate what amounts of each material are included in the general civilian tier.

Senator HART. What you are proposing is to do away with the amount of that material which might be set aside for general civilian?

Senator PROXMIRE. That's not essential civilian.

Senator HUMPHREY. You are proposing certain reductions in quantities across the whole thing?

Senator PROXMIRE. That is correct.

Senator HUMPHREY. What sort of products would the civilian sector have to do without?

Senator PROXMIRE. They would have to do without jewelry. They would have to do without new cars.

Mr. CHURCH. Mr. Chairman, there may be some point of confusion about the planning of stockpiles in the civilian tier. I hope we can help to enlighten the committee.

The planning for the general civilian tier does include an austerity program. Factors are introduced into our planning that would take out the luxury-type items. Our planning does presume conversion to an

austere economy from the civilian sense, as we proceed to an emergency and wartime footing.

Senator HART. The general civilian and industrial stockpile is not designed for the purpose of continuing consumption at present non-wartime levels.

Senator PROXMIRE. That is right, of course. What I'm saying is not that we can't produce jewelry or automobiles. I'm just saying we don't need to stockpile them.

Mr. ZABROWSKI. Mr. Chairman, we don't stockpile for jewelry now.

Senator HART. They're not stockpiled for the purpose of producing jewelry.

Mr. ZABROWSKI. Approximately 15 percent of the gross national product is not backed up by the stockpile at all. There are various quantities of materials—jewelry happens to be one of them, toys is another—we have no stockpile planned for materials of that nature. We have a fourth tier we call the phantom tier.

Senator PROXMIRE. Called a what, sir? I missed that.

Mr. ZABROWSKI. The phantom tier. That is the tier for which there is no stockpile backup in the economy and in total over all the products that are made in the economy, this does amount to about 15 percent of our gross national product.

[Additional information follows:]

Our view is that the United States could not fight an extended conventional war without a strong civilian economy. This principle is embodied in the National Security Act, the Strategic and Critical Materials Stock Piling Act and in the Defense Production Act, and reflects the actual experience of World War II and the Korean conflict.

Industries do not produce just defense or just essential or general civilian tier products. Instead a single worker on a production line may produce industrial fasteners for aircraft (Defense Tier), for farm machinery (Essential Civilian Tier), and for office equipment (General Civilian Tier). A single factory could also produce a variety of products which fall in different categories. Prior experience indicates that severe economic dislocations occur when an adequate level of support is not given to the industries providing indirect inputs to critical defense and non-defense production. For example, during World War II when the industrial structure was far less complex and interrelated than it is today, planners found that:

"It soon became only too evident that it was impossible to separate sharply 'civilian' and 'defense' materials and facilities at a time when defense requirements were everywhere reaching down into industry stockpiles and military and commercial items were being produced side-by-side in the same factories." (George W. Auxier, *Industrial Mobilization for War: History of the War Production Board and Predecessor Agencies 1940—1945*).

"A civilian economy characterized by health and vigor is basic to effective production for war; and whatever is needed to keep the economy running so that it can further the war effort represents an essential claim on the national resources." (Harry B. Yoshpe, *Economics of National Security: Matching Needs with Resources*).

For the first time, stockpile planning has been structured to provide the most insurance for the most important parts of the economy and less insurance for the parts where risk is most plausible. Planning addresses three parts of the economy separately.

The first part is direct Department of Defense consumption and the industrial production necessary to support that consumption. The most conservative assumptions go into establishing the goals for Defense needs.

The second part is called "Essential Civilian" consumption. The third is called "General Civilian." Together, they form the requirements of that part of the civilian economy needed to support wartime needs and/or maintain a viable industrial base. In setting stockpile goals, we don't consider at all demand for activities that are not needed in wartime. For example, the stockpile wouldn't be used to meet demand for jewelry and amusements such as spectator sports.

The distinction between "Essential Civilian" and "General Civilian" is important. "Essential Civilian" products are more directly tied to the war effort and cannot readily be made with substitute materials. "General Civilian" products are less directly tied to the war effort and can, to some degree, be made with materials that are not strategic and critical. But production of these items is necessary if we are to feel confident of our ability to remain strong during a war.

Prior to the introduction of the approach now in use, all requirements, defense and civilian, were lumped together in one aggregate: a pound of copper for cartridge cases was given the same importance as a pound of copper for kettles. We believe that, by separately treating defense and civilian requirements, we have enhanced national security planning. Furthermore, our subdivisions of the civilian sector create a smaller stockpile than if the subdivisions were combined.

It is to be emphasized that although it is called the "General Civilian" Tier, it is really a lower level of essential civilian needs. It is established after adjustments are made to the civilian sector for austerity, conservation, and possibilities for substitution. If the new policy act is passed, the "Essential Civilian" Tier will remain the same and the present "General Civilian" Tier will be called "Industrial." These name changes would make the nature of these sectors clearer. FPA really does not stockpile for "civilian" needs in the "butter" sense that these words imply to lay persons. The "butter" or "fat" of the economy is removed through austerity assumptions first.

The value in 1976 dollars of the stockpile goals for the General Civilian Tier is about \$6 billion, based upon the 1976 stockpile goals. This value can be expected to change as the international environment and other factors change. For example, preliminary calculations which will eventually result in updated stockpile goals indicate that about 30% of the value of the updated goals would fall in the General Civilian Tier.

It should be understood that the potential General Civilian Tier cost of \$6 billion is approximately halved by existing inventories of strategic materials. Further, this tier, unlike the more critical Defense and Essential Civilian Tiers, has much greater risk, hence less costly, factors applied. If a more "conservative", i.e. less risk, had been applied to the General Civilian Tier, the \$6 billion figure would have been much higher.

While two agencies participating in the eight agency study of 1976 did not agree with the inclusion of this tier, their reservations were largely couched in terms of the need for further analysis of the issue. In any case, the options presented to Presidents Ford and Carter included the flexibility to delete the General Civilian Tier if the President so desired. The President's decision reflected the view of a majority of the agencies in the interagency study group.

STOCKPILING FOR THE CIVILIAN SECTOR OF THE ECONOMY

There has been no change in the nature of civilian demand to be met through stockpiling. However, procedures used to calculate the requirements have changed in recent years. This has caused some confusion because the civilian sector used by stockpile planners has now been divided into two pieces for planning purposes. What these two pieces represent is sometimes unclear. The following discussion is intended to clarify that point.

The words "civilian sector" refer to all non-defense economic activity. Stockpile planners define this sector quite narrowly, identifying specific items required for specific war years. In general, the civilian sector refers to private citizens and industry, as well as the non-defense part of government. It also includes all types of fixed investment and foreign trade.

Stockpile goals fill the gap between the nation's wartime requirements and supplies. The goals do not emerge magically from a computer model into which raw numbers are fed: the data that go into the model result from hundreds of individuals' decisions made by industrial specialists, materials experts, and econometricians. They are based on broad policy guidance, which includes the following concepts.

The stockpile will be designed to support the direct and indirect requirements of the Department of Defense in wartime.

The stockpile will be designed to support only those civilian requirements needed to support the war effort and maintain a viable economy and a healthy population.

The stockpile will be designed to support three years of a major conventional war preceded by a warning period in which industry will expand.

The methodology now used by stockpile planners—the use of computers and detailed data and assumptions—has not eliminated the need for analysis and review by experts. It has, however, provided an orderly, logical system for doing

these tasks. And it has enabled planners to analyze and update decisions systematically as data and methodology improve.

Before proceeding with a discussion of civilian sector needs envisioned by stockpile planners, we should provide a historical setting.

HISTORY

Soon after World War II, Congress passed several laws pertaining to national planning for wartime emergencies. Each of these provided quite specifically for the civilian sector of the economy.

In 1946, the Strategic and Critical Materials Stock Piling Act was designed to ensure that the "industrial . . . needs of the country for common defense" as well as the "military and naval" needs would be met through a stockpile program preventing dangerous and costly dependence on foreign sources of supply.

Soon after came the National Security Act of 1947, setting into place the outlines of the defense and intelligence structures remaining with us to the present day. This act charged FPA's predecessors with the job of advising the President on several matters. These included programs to support wartime needs of the military and civilian sectors and for the "maintenance and stabilization of the civilian economy in time of war." In using these words, Congress gave special attention to the importance of a viable civilian economy in sustaining a war effort.

The message was given still more clearly in the Defense Production Act of 1950. In response to the Korean War, the Act was intended to expand "productive capacity and supply beyond the levels needed to meet the civilian demand, in order to reduce the time required for full mobilization in the event of war." This basic policy—that the civilian sector of the economy will be supported in wartime—has been reiterated every two years since 1950 as each successive Congress renewed the Defense Production Act.

President Carter and President Ford both placed themselves firmly within this general policy when they issued the guidelines now used by stockpile planners. The present guidelines embody the principle that the nation's ability to fight an extended conventional war depends on the overall strength of its civilian economy.

DEFINITIONS

Planners define the components of the civilian sector in detail to help them sort out activities requiring more stockpile support from those requiring less support or those that are not suitable for such support.

Terms used by stockpile planners have specific operational definitions. Words such as "essential" and "general" which are vague and imprecise in their ordinary usage are defined for stockpile purposes in extraordinary detail by using lists of items and amounts of each item assigned to the categories. These definitions appear as tables included in this discussion.

Some of the most important terms used by stockpile planners are:

- Essential Civilian Tier.
- General Civilian Tier.
- Phantom Tier.

A discussion of their significance follows.

The Essential Civilian Tier is a category of demands of the civilian sector. It includes a wide variety of items: clothing, machinery, electrical equipment, and many others. However, quantities of these items also appear in another tier, called the General Civilian Tier.

Reading a list of items and quantities falling into each tier will give the clearest understanding of the differences between them. But there are some general distinctions to be made.

Demand that is "Essential Civilian" is more directly tied to the war effort than the "General Civilian" demand. The "Essential" demand usually cannot be met by using substitute materials to make the desired items. To meet this demand, some strategic and critical materials would be needed.

Demand that is "General Civilian" arises from the need to support the overall viability of the economy and to maintain the health, morale and productivity of the civilian population. To keep factories working as they retool for war, their needs for raw materials must be met. Overall, the General Civilian Tier stockpile goals are much smaller for the third war year than for the previous two years because it is expected that the transition to a wartime economy would by then have reduced the need to support such demand.

Dividing the civilian sector into two parts results in lower stockpile goals than would be the case under the former planning procedures. In the "old days," only one set of planning assumptions was applied to civilian stockpiling. For the two civilian sectors now in use, there are two separate sets of planning factors. The planning factors used for the General Civilian Tier result in smaller stockpiles per unit of demand than do those used for the Essential Civilian Tier.

The Phantom Tier is so called because there are no stockpile goals to meet civilian demand in this tier. This includes demand for luxuries. In fact, the Phantom Tier is comprised entirely of personal consumption expenditure items that otherwise would appear in the General Civilian Tier.

Overall, the Phantom Tier contains about 15 percent of the projected wartime Gross National Product. This tier is expected to grow dramatically as the war years pass and the economy adapts to wartime demands.

The Phantom Tier contains demand that is not to be met through stockpiling because of assumed wartime austerity measures. Austerity refers to the reduction in the civilian standard of living that will be imposed in wartime. Planners assume that there will be a 10 percent reduction in per capita personal consumption expenditures by the third war year. This reduction is measured in constant dollars. It is a sharper reduction than occurred in World War II. The austerity assumed by stockpile planners reflects policy decisions that the nation will not stockpile for a "guns and butter" economy. It also reflects the fact that stockpile planning is not based on World War II assumptions.

The way the three civilian tiers are constructed by stockpile planners embodies the assumption that normally unavailable strategic and critical materials will be released for the urgent requirements of war by a number of measures to be implemented as the war progresses. Stockpile planners assume that consumers would spend substantially less on durable goods (such as automobiles, washing machines) and relatively more on nondurable goods and services (such as newspapers, and automobile repairs). In addition, businesses would need to invest in industrial machinery and equipment to meet the growing demand for military equipment. This would replace much of the investment in private housing.

It is further assumed that, as the war progresses, Americans will be able to find substitutes for strategic and critical materials in many uses. For example, builders will find adequate, if less satisfactory materials for insulation, wiring, or heating systems.

As a result of these activities, more stockpile materials will be available for the greatly-expanded war-related industrial activity than is normally available for such production.

The following table shows the severity of the civilian austerity expected by stockpile planners under current guidelines. An index is used with 100 being the base year. The table shows that during World War II, civilian consumption dropped very little. During the Korean War, it increased little more than 5 percent. During the Vietnam War, a true "guns and butter" situation, civilian consumption grew by more than 10 percent by 1967. During the war envisioned by stockpile planners, this type of consumption would drop by 10 percent by the third war year.

TRANSPORTATION—AN EXAMPLE

It may be helpful to give an example of how a given category of demand is divided among the different tiers during the course of the projected war period.

A useful example would be transportation, which is associated in some way with almost every aspect of the nation's economy.

During a war, we assume that the supply of new automobiles for consumers would be halved by Government austerity measures (that is, by setting limits on overall spending levels and limits on durable goods expenditures). The remaining half would be considered "General Civilian" because it can be considered support for the overall viability of the economy and population. It is expected that these automobiles would be used for carpooling and other necessary travel activities.

By the third war year, the supply of new automobiles to consumers would be further reduced to only one-quarter of the prewar supply by including a portion of the demand in the Phantom Tier, where it would receive no stockpile support. American industry would continue to manufacture automobiles to meet direct and indirect defense needs (such as jeeps) and the needs of business in the growing industrial base.

Because the availability of new autos is restricted, stockpile planners assume that there would be full support for automobile repair services and public transportation, both of which would be considered Essential Civilian. With respect to auto parts, half would be considered Essential Civilian and half General Civilian,

reflecting the fact that some private transportation needs would be more closely tied to the war effort than others.

INDEX OF ACTUAL AND PLANNED WARTIME CONSUMPTION BY INDIVIDUALS

War	War year				Actual years used
	1st	2d	3d	4th	
World War II.....	100	96.5	97.8	99.8	1941, 1942, 1943, 1944.
Korea.....	100	103.8	102.1	105.1	Fiscal years 1950, 1951, 1952, 1953.
Vietnam.....	100	104.6	109.1	111.0	1964, 1965, 1966, 1967.
Stockpile.....	100	98	95	90	M, ¹ 1, 2, 3.

¹ M=The year before the war.

It is expected that the supply of trucks, rail equipment, and aircraft would have to grow to support the expanded wartime industries. This consumption is considered Essential Civilian. In the case of ships and boats purchased by industry, half of the total demand would be considered Essential Civilian. Because wood, fiberglass, and other materials can substitute for strategic and critical materials in building some vessels, half of industry's demand in this category of demand is considered General Civilian.

Transportation is only one of many categories of demand considered by stockpile planners. The same kinds of distinctions are made for all categories of demand during the complex decision-making process used to set stockpile goals. In every case, it is necessary to coordinate decisions made in one category with those made in related categories so that stockpile plans are internally consistent. In this way, planners avoid the problems that arose in past years when major stockpile decisions were made without adequate reference to related matters.

For "New Cars, Net Used Cars" (line 1), the attached table reflects this analysis.

STOCKPILE POLICY AND OBJECTIVES DIVISION—PERSONAL CONSUMPTION EXPENDITURES

	1979			1980			1981			1982		
	EC tier	GC tier	Phantom tier	EC tier	GC tier	Phantom tier	EC tier	GC tier	Phantom tier	EC tier	GC tier	Phantom tier
New cars and net used cars.....	0	\$44,900	0	0	\$41,200	0	0	\$3,330	\$3,510	0	\$15,600	\$15,600
Kitchen and other appliances.....	\$5,882	5,882	0	\$4,762	4,762	0	\$3,330	3,330	0	\$2,808	1,480	1,328
China, tableware and utensils.....	2,153	2,153	0	1,774	1,744	0	1,227	1,227	0	1,044	1,522	1,522
Other durable house furnishings.....	7,979	7,979	0	6,572	6,572	0	4,614	4,614	0	3,939	3,491	448
Jewelry and watches.....	0	4,786	0	0	0	0	0	0	2,728	0	0	2,321
Wheel goods, toys, boats.....	0	7,368	0	0	4,705	0	0	0	4,200	0	0	3,573
Women's and children's clothes.....	16,626	16,626	0	17,581	17,581	0	18,536	18,536	0	19,519	0	19,519
Men's clothing.....	8,537	8,537	0	9,027	9,027	0	9,517	9,517	0	10,022	0	10,022
Toys and sport supplies.....	0	7,537	0	0	0	0	0	0	8,864	0	0	9,433
Theatre and races.....	0	2,001	0	0	0	0	0	0	2,230	0	0	2,355
Spectator sports.....	0	1,107	0	0	0	0	0	0	1,234	0	0	1,303
Clubs and fraternities.....	0	1,107	0	0	0	0	0	0	1,234	0	0	1,303
Participant amusements.....	0	2,668	0	0	0	0	0	0	2,974	0	0	3,140
Other recreational expenses.....	0	6,323	0	0	0	0	0	0	7,048	0	0	7,442
Religious and welfare activities.....	0	8,097	0	0	8,547	0	0	0	9,026	0	0	9,530
Foreign travel by United States.....	0	5,549	0	0	5,857	0	0	0	6,186	0	0	6,531
Personal consumption expenditures--	41,177	132,621	0	39,686	99,994	27,292	37,224	66,715	49,234	37,333	21,094	94,370

Senator HART. Which would generally be considered luxuries?

Mr. ZABROWSKI. Yes, sir, and while it is true that as the war begins we do have to provide for some new cars for the population that is now living in highly urban areas, and that, even as we move into the second and third year of the war, we're already pushing a lot of the new car expenditures into the phantom tier and not backing it up.

Senator PROXMIRE. What this amendment would do is knock out the phantom tier and also the next column, which is the general civilian tier. Those are differences.

Mr. ZABROWSKI. I understand, Senator, but there is no stockpiling for the phantom tier now.

Senator PROXMIRE. That is right, but we would knock out the general civilian tier, which is the next column.

Mr. ZABROWSKI. All right, I understand what you are saying, sir.

Senator HART. We did have Santa Claus during World War II so kids could still get toys.

Senator PROXMIRE. The toys would have to be produced with whatever is essential to produce them.

Senator HUMPHREY. Mr. Chairman, what is the justification for including these quantities of commodities in the stockpile in the first place?

Senator PROXMIRE. I'm not sure. Are you familiar, Paul, with the reasons we included general civilian goods?

Mr. WINSLOW. My understanding is that it is the way the administration has come to interpret "industrial" in the stockpiling law, although there is some disagreement. There was some disagreement in the Ford administration review as to what the word "industrial" meant in the stockpiling law. Several agencies which Senator Proxmire mentioned—the Treasury Department, the Office of Management and Budget—said they do not agree that "industrial" in the stockpiling law means that we have to provide for general civilian needs.

So they proposed a stockpile policy which only included military and essential civilian tiers.

Senator PROXMIRE. That is offered in my amendment, what they proposed.

Senator HUMPHREY. Mr. Chairman, would it be in order to solicit comments from these gentlemen on the Senator's proposal?

Senator HART. Certainly, and in fact I was headed in that direction. Senator Thurmond had a question when he began. In fact about the time you came in, Mr. Mitchell was commenting on some of Senator Proxmire's amendments.

If you gentlemen would care to repeat them or summarize them or add any additional thoughts, that is the purpose of this hearing today, to get this exchange going. You have fairly wholeheartedly embraced the committee's bill.

Mr. CHURCH. The Federal Preparedness Agency has included their comments which are not unlike ours, for the record. Allow me to discuss the three amendments from the DOD standpoint.

The first amendment concerns the general civilian tier. The Defense Department has many hundreds of thousands of prime contracts. However, in addition to those, and in support of prime contractors, there are millions of suppliers at the subcontract level. They supply our prime contractors with every kind of conceivable item, from screws to the most sophisticated electronic devices.

Those same subcontractors and some of our prime contractors have only a small portion of their business within the so-called defense community. That is, they may take off their line a handful of screws or something on that order for defense contracts, but most of their output goes to the civilian economy. There is an inextricable inter-relationship, between defense and civilian markets in this segment.

As a matter of fact, an important cost savings program under my jurisdiction is the commercial commodity acquisition program. Within this we try to save money right now in the defense arena by buying commercial. That is, buy items like the nondefense community buys them. I believe there are many excellent commercial products which we tend to reinvent with needless specifications. As a matter of fact, the direction we're moving toward is to rely more heavily on the so-called commercial industrial sector, as opposed to the defense industrial sector.

Senator HART. Can you give us some examples of what you are talking about here?

All kinds of fasteners. In any given aircraft there are several tens of thousands of fasteners including: rivets, screws, nuts and bolts, most of which are simply commercial items that are bought——

Senator PROXMIRE. May I interrupt? Could I ask you are fasteners included in the essential civilian or general civilian?

Mr. MITCHELL. In all three sectors.

Senator PROXMIRE. I noticed that with most of these products—engines, tractors, mining, metal, and so forth, 100 percent is in the essential civilian tier.

Senator HART. It is a point here that the stockpile doesn't include finished products. It includes raw materials, commodities from which the products are made. I don't think the stockpile envisions piles of fasteners. It involves piles of raw materials from which fasteners are made for both civilian and military purposes.

Mr. CHURCH. Exactly. As the scenario starts to build up, meaning hostilities are building up around the world and so on and so forth, we would want to be able to begin conversion for increased defense production. However, as you begin to allocate more materials to one of these producers, you're not going to be able to take him over immediately and devote his production lines to serve only defense needs. If you're not careful there, you might shut off his supply of materials, and when you come back to pick him up for defense needs, you'll find he's out of business and all his people have gone elsewhere.

Senator HART. What you are saying, as you move in procurement toward procuring essentially civilian design materials or products, if the Proxmire amendment were to prevail, you're cutting off the stockpile out of which those products will be made, is that correct?

Mr. CHURCH. That's right. Even though we may not be cutting off the horses, the nails that go in the shoes of the horses going to war might in fact disappear from the scene. We can employ the classic story of the guy who was producing the nails to go on the horseshoes that suddenly did not have the metal for his horsehoes or nails, and wasn't in business when he was needed.

Senator PROXMIRE. If this is true, isn't there something wrong, then, with your category of essential civilian tier? Can you submit for the record examples of general stockpiling outside of the essential civilian that would meet the objection you're making here? It seems

to me if you're going to have an essential civilian tier, that means that you're producing what we have to have in order to keep anything that even is remotely related to the military in our national security covered.

Mr. CHURCH. Yes. I think the effect would be the beginning of a merge of the general civilian and the essential civilian tiers. We might end up at the same place we are now, but yes, we will try to do that. [The information follows:]

Many of the same items are used in the military, essential civilian and general civilian (e.g., industrial) tiers. Examples include: antennas; batteries; bearings; fan belts; capacitors; clothing; electrical connectors; electrical insulators; engine air and oil filters; engine components; fire fighting equipment; fasteners; footwear; gears; hoses and tubing; lighting fixtures; microelectronic circuit devices; oils and greases; packing and gasket materials; pest control agents and disinfectants; plumbing fixtures; pumps; radio and television communication equipment; relays, connectors and solenoids; resistors; rings, shims and spacers; rope, cordage and twine; safety and rescue equipment; semiconductor devices; shoe repairing equipment; springs; storage tanks; switches; telephone and telegraph equipment; transformers; electrical tubes; vehicle brake steering, axle, wheel and track components; water distillation and purification equipment; welding equipment; winches and hoists; X-ray equipment and supplies; and yarn and thread.

During a surge in production, from a peacetime to a wartime footing, all of these items must be produced for consumption by all three tiers. Over a period of time the military tier will account for an increasing amount of the production output. However, a certain amount of the production must remain devoted to the general civilian tier. If raw and semi-finished materials were allocated just for the military and essential civilian tiers, there would exist a period of time during which (a) general civilian orders could not be honored and (b) military and essential civilian orders would not be of a great enough magnitude to keep the business healthy. This could lead to premature closure of businesses which in turn could result in a torrential erosion of the industrial base. To avoid this happening we must plan for a continual, albeit reduced, flow of raw materials into the U.S. economy to maintain the health of all businesses engaged in producing items which will be required to support the military and civilian population during the war period as well as the recovery period.

Above, examples were given of items produced for use by all three tiers. These items may be produced in a number of facilities and distributed to military, civilian and industrial customers. However, there exists another situation in which a business may be set up to produce a wide variety of items. Only a small portion of the items produced may be meant for military use. The majority of items produced may only serve non-military customers. Due to this volume of civilian business, it is the non-military market which keeps the business healthy. However, the aggregate of all such businesses may very well be the major source of supply of certain items for the military. If raw material supply is terminated for the non-military portion of these businesses, the military portion may not be of sufficient magnitude to keep the business healthy, and closure would be imminent. Here again, our industrial base would be subject to further severe erosion.

Examples of these businesses which are in operation today and are of this nature are listed below. Their military products are listed on the left and non-military products on the right. In most cases the same machinery is used to produce both products:

<i>Firm's military product</i>	<i>Firm's nonmilitary product</i>
1. Metal parts for fuzes and fire control.	1. Metal parts for and assembly of hamburger makers.
2. Projectile shells.	2. Grave vaults.
3. 30-mm ammunition clips.	3. Tool dies.
4. Precision timing components.	4. Watch and clock parts.
5. Projectile shells.	5. Automobile wheels and bathroom fixtures.
6. Metal parts for 30-mm ammunition.	6. Bicycle parts.
7. Metal parts for 155-mm and 60-mm ammunition.	7. Refrigerator shelving.

Mr. CHURCH. Just at hand, a good example is brake shoes. The metal parts in automotive brake shoes are made by the same people who provide them for aircraft. The metal in aircraft brake parts may be essentially the same as used in automobile brake parts, of which millions are produced but for aircraft hundreds are produced.

Senator PROXMIRE. Isn't that 100 percent essential? Isn't that likely to be 100 percent essential—brake shoes? Is it not?

Senator HART. Not if they're universally designed for military and civilian purposes. That is his whole point. The procurement policy is beginning to blur, largely blur in the distinction of what is essential and what is general.

Senator PROXMIRE. My problem, Mr. Chairman, is you are right about how it is between some civilian and some military, but it seems to me when you have the military and in addition to that the essential civilian, you would almost certainly cover all places.

Mr. CHURCH. Senator Proxmire, our attempt and we can argue whether it's been adequate or not, has been to plan the conversion from producing peacetime products to wartime products within various industries. This includes an austerity program, which means the industrial base would not be producing luxury or nonessential items except in the instance of a company which, if it were cut off from raw materials to produce its product, would not be capable of making this peacetime to wartime conversion over a specific period of time. We may come back and find he has shut down completely, making it too late to get him back up to speed to produce what we need for the military or essential civilian tiers.

Senator PROXMIRE. We all agree that is wrong, and that is why I am just suggesting that it might be helpful if you could get in the record examples of that.

Mr. CHURCH. The second amendment is really a question of flexibility. Without discussing specific war scenarios which get into classified information, very specifically, we need to have for the President a flexibility of response in every arena. To have to declare a national emergency or war in order to release stockpile materials, would be exactly the wrong signal to send the world in many instances. One example might be a cessation of cobalt from Zaire. This material is essential for the turbine blades that go in our aircraft engines. The Zairean situation may be isolated, and then again it may be part of a pattern about which we have been concerned. Must we send a signal out to any potential enemy that we have declared war or declared a national emergency in order to release stockpiled cobalt for rated orders during a shortage. In a period of increasing hostilities, I think that would be exactly the wrong signal we would want to send.

We would want the President to be able to make these minor moves, which enable us to proceed through a period of preparation without having to send out major signals of any sort. Certainly we should expect in today's complex world there will be a series of incidents, however unrelated or related as they may be, which may lead to open hostilities. The stockpile is maintained for the purpose of protecting us from dangerous shortages of materials for which we are foreign-source dependent. For example, at any given time we may have a Zairean situation which would cut off our source of cobalt.

Titanium sponge is another example of a material for which we are import dependent. The Soviet Union could cut off part of our supply at any time. Certainly titanium sponge is another material which is essential to both commercial and military aviation. We must be able to release titanium sponge from the stockpile to fill military orders without declaring a war or a national emergency in order to continue aircraft production, again without sending strong signals.

The last amendment, is just a short one——

Senator HART. Before you move on to that, is it not true that national emergencies are usually declared when it is perceived that this Nation has a vital enough interest to put ourselves on a semiwartime footing? What you are suggesting is that there are, because of Third World political considerations, a lot of economic and political steps that might be taken by raw material producing nations that would not qualify us for declaring a national emergency where that economic and political change occurs, but when it does, place a demand on a stockpile, a real and legitimate one. Is that what you are saying?

Mr. CHURCH. It certainly very well could happen that way, yes.

Senator PROXMIRE. Isn't it also true that they can come to Congress to get the authority because in this case Congress would certainly give it to him? What concerns us is that the President might, as Presidents have done in the past, hold over industry the threat of releasing the stockpile if they don't comply with some sort of economic or political notion of holding down a price. The President is in a position to manipulate a price by threatening to release the stockpile. It was done in the case of copper, I think. It can be done again to hold down the price.

It is that kind of arbitrary Presidential authority that concerns many Members of Congress and the public and the business community.

Mr. CHURCH. It is our observation the bill has that effect already. We believe the bill has done that already. We certainly applaud the intent of the bill to preserve the stockpile for the national defense.

As long as the President can release materials in the interest of national defense, I'm sure we can work out some kind of language. However, I believe the bill does that already, Senator.

Senator HART. You are correct. This bill, S. 290, that we are deliberating now does in fact require congressional authorization to dispose of material in the stockpile, and the present law does that. It is my understanding that Senator Proxmire's amendment would in fact delete that provision and in effect make the President declare a national emergency, where at the present time he does have to come to Congress for authorization for disposing of the stockpile. This bill would keep that.

Mr. WINSLOW. I think the provision that Mr. Church is concerned with does not deal with excess materials—not disposing of excess materials, but releasing materials from the stockpile at times when they are needed for national defense purposes.

Senator HART. But even then, the law and this bill would require congressional authorization.

Mr. WINSLOW. I don't believe so.

Mr. CHURCH. Not to release it to the industry, but declare the intention and that is what the bill intends.

Senator HART. Senator Proxmire, based on our colloquies last year, we are both trying to head the same direction. That is, to prevent the use of the stockpile for economic abuse or for political purposes and so on. Both of us are coming at this from a different direction.

Mr. CHURCH. We applaud that as well.

Senator HART. Would you go on with point No. 3?

Mr. CHURCH. We think there is a distinct benefit in having a stockpile and this is simply not measurable in dollars as is the case of many of our defense programs. We agree that defense is an expensive and ever-increasingly more expensive proposition for the United States. We never had any doubt it costs us much more money than we would like to pay under any risk. We are trying to be as economical as possible in preparing for the defense of the United States. The stockpile is just one more cost of defense.

I don't see what monetary interest has to do with defense, nor would I anticipate the United States would want to get involved in a commodity brokerage or trading of materials in and out of the stockpile in order to take account of appreciation. It seems to me the bill declares an intention to avoid that sort of trading and to make the stockpile as economic as possible.

The stockpile is meant for one clear and distinct reason. This is to protect the security of the United States. So I don't know how you put a dollar value on that and I certainly don't know how you would offset against the loss of interest. However, I firmly believe any interest you might assign the stockpile would be more than offset by the value for which it was created in the first place.

Senator PROXMIRE. I think you are 100-percent correct. I think that is right. I think we ought to know and understand what the cost is. That is all this would do. There would be income as well as an appropriation. But what it would do, it would alert us to the fact that when we keep this much in the stockpile, it is costly.

You're right. The reason might be well justified. I'm sure it is under most circumstances. But at least we would be aware of that. We would have that kind of reminder. We don't have that now.

Senator HART. Senator Cannon?

Senator CANNON. No questions.

Senator HART. Just on the issue of the second Proxmire amendment, I just want to quote from our last year's report, from the predecessor bill to the one we are considering today on the question of emergency releases.

The state of the situation now is we have two different procedures for excess material and emergency funds, release of excess materials and release of emergency materials. The current language in S. 290 requires congressional authorization to release excess materials. The Proxmire amendment would permit the President to release it without congressional authorization. Emergency releases under the current language in S. 290, are up to the President, under situations which are deemed to be emergencies. The Proxmire amendment would forbid that without congressional authorization.

We cite in our report last year that there are very few instances where the President has released materials under emergency situations. Those occurred, the best we can tell, in 1956 and 1959. There were releases of mercury from the stockpile to the Atomic Energy Commission for nuclear weapons production. The mercury was not available through commercial sources. And in 1973, quinine was sold to pharmaceutical manufacturers because the Vietnam War depleted the emergency supply.

The committee indicated that we approved of those releases and retained the language of the original Stockpile Act in that regard. I don't think there has been wholesale abuse, but I think the Senator from Wisconsin, as well as this committee, is concerned about the potential for that, and the manipulation that can occur.

I don't have any other questions myself for Senator Proxmire. I have one or two for General Palmerton, and then I think we are about done unless others have questions.

Senator PROXMIRE. I would just like to ask Director Mitchell of the Federal Preparedness Agency—is that right, sir?

Mr. MITCHELL. Yes.

Senator PROXMIRE. If you would submit data on what brake and wheel manufacturer would not be covered by the essential civilian tier and also whatever data you have on fasteners. I would like to get those two examples because of my conviction that the essential civilian would cover these. I may be wrong. Any other answers that you may give which would be illustrative of this situation would be welcome.

Mr. MITCHELL. We understand the Senator's concern and we would be happy to provide that to you.

Senator PROXMIRE. Thank you very much.

[The information follows:]

Industrial fasteners are used throughout the economy. The Federal Preparedness Agency estimates that 15% of the fasteners consumed in 1978 were consumed in support of military purchases. Approximately 47% and 35% were consumed by the "Essential" and "General" Civilian Tiers respectively. By the third war year DOD consumption accounts for 28.0% of usage while the essential civilian usage rises to 50% of consumption of the balance, 17% is consumed by the General Civilian Tier and 5% is conserved through austerity measures.

The general civilian fasteners are consumed in the manufacture of items such as household and office furniture and equipment, automobile repair and replacement parts, end items manufactured from steel, and in residential housing.

FPA cannot make any direct estimate of brake and wheel consumption. However, by assuming this consumption is directly related to motor vehicle production, an indirect estimate can be made. Given this assumption, the Defense Tier represented 3% of brake and wheel consumption during 1978 compared to 72% of consumption for the General Civilian Tier.

By the third year of the war DOD and Essential Civilian consumption jumps to 46% of brake and wheel manufactures. Most of the General Civilian consumption is keyed to new purchases of motor vehicles by state and local governments and industry. These vehicles would include trucks, school buses and other public transportation in addition to automobiles.

Senator HART. Thank you very much. I appreciate your contribution. You have enlivened the hearings, as usual.

Senator PROXMIRE. If not enlightened them.

Senator HART. General Palmerton, could you very briefly generally describe the role of the Joint Chiefs in strategic stockpile planning and how the Chiefs' role is related to that of the Department of Defense generally and the Federal Preparedness Administration?

General PALMERTON. I would say that our involvement in this particular area is in the traditional sense, as far as the Joint Chiefs of Staff are concerned. We are concerned with reviewing requirements and making recommendations for support of operational and contingency plans.

In the area of stockpiling of strategic and critical materials, we are involved in two ways. First, we have direct representation on the FPA Annual Materials Plan Steering Committee we referenced earlier. Second, we provide our influence through various DOD policy documents issued throughout the year. More specifically we provide inputs through the Joint Strategic Planning Document which in turn is fed into the Secretary of Defense's Draft Consolidated Guidance; and we assist in the preparation of the joint program assessment memorandum which ties directly into the OSD program decision memorandums. These are avenues by which the Office of the Joint Chiefs of Staff can be heard.

Senator HART. Proposals were made for provisions or changes in the stockpile procedures, for example such as the bill before us this morning. Are your views sought by policymakers, by the administration, with regard to that legislation?

General PALMERTON. They are, yes, sir.

Senator HART. I am not trying to get you to talk out of school here, but you don't have any particular complaints that positions are taken by the administration or civilian policymakers without adequate consultation with the Joint Chiefs?

General PALMERTON. No, I certainly do not and I certainly do not as far as this bill is concerned.

Senator HART. Without getting into classified information, can you suggest generally the type of scenario that might require a 3-year stockpile?

General PALMERTON. It is difficult to get very far into this particular discussion without getting classified. Naturally, the length of a war cannot be predicted. Therefore, as a general statement, the United States must be prepared to sustain a level of preparedness on mobilization to meet a variety of threats. Above all, we must be able to provide the National Command Authorities the options and alternatives to meet a contingency of any reasonable duration. I would submit there are three general scenarios that could require or draw from a 3-year stockpile. One would be mobilization for and engagement in a conventional conflict that would actually involve direct participation by U.S. forces. A second would be support of a conventional conflict involving an ally or allies of the United States. A third situation would be a general deterioration of world economic and political conditions that could disrupt availability and supply of various critical materials. Each of these scenarios has a wide range of subjects that could conceivably lead to a need for at least a 3-year stockpiling of certain materials.

Senator HART. The reason I ask, of course, is that many, I think, thoughtful people believe that future wars would be of short duration and high intensity and would be won or lost with the resources available when that war starts, and that has raised in the minds of many the question of why we would need 3 years of stockpile during the circumstances.

I think the kind of war-planning scenarios that this committee considers in a broader context are often premised on that possibility, a much shorter intense type of warfare, and I think we need your thoughts and judgment on why, given that possibility or even probability, of why 3 years, why placing this, if you take the Proxmire view that it is a drain on the taxpayer for maintaining the stockpiles necessary given those likelihoods.

Mr. CHURCH. Mr. Chairman, General Palmerton participates mostly in the classified area of the scenarios. He is trying to answer the question in an unclassified vein.

Let me point out one thing. The 3-year scenario, for which we might need the stockpile, doesn't start when the balloon goes up. It may have been in existence for some period prior to that time. Therefore, the war may be of shorter duration than 3 years. Again this is hypothetical rather than the specific. As I mentioned earlier, we may have a period of hostilities which precipitates the cessation of supplies of specific goods from around the world. If we are foreign source dependent, this cessation of supply may build up over a period of several months if not several years as we lose one source and then another source. We may have to release material from the stockpile during this time well before the actual hostilities begin.

So a 3-year plan has got to take into account this kind of flexibility as well as the various wartime scenarios when the balloon actually goes up.

General Palmerton, you may want to comment briefly.

Senator HART. That is exactly the kind of contingency I was trying to get into here. War doesn't just start.

Senator CANNON. Did you have any questions?

Senator HUMPHREY. No, thank you.

Senator HART. We may have some additional questions for the record and we appreciate your cooperation in that regard.

We have a request from Mr. J. Allen Overton, Jr., president of the American Mining Congress that a statement by Mr. Charles R. Carlisle, vice president of the American Mining Congress be considered for inclusion in the hearing record. I would like to have that statement inserted in the record at this point.

[The prepared statement follows:]

PREPARED STATEMENT OF CHARLES R. CARLISLE, VICE PRESIDENT, ST. JOE MINERALS CORP., ON BEHALF OF THE AMERICAN MINING CONGRESS

Mr. Chairman and members of the Committee, the American Mining Congress appreciates this opportunity to appear before you this morning to testify on S. 290, the Strategic and Critical Materials Stock Piling Revision Act. The American Mining Congress represents the domestic producers of metals and minerals and I serve as a member of its Committee on Minerals Availability. My corporate affiliation is with St. Joe Minerals Corporation of which I am a vice president. The mining industry, through the American Mining Congress, has repeatedly expressed its concern over the stockpile program in previous hearings before this committee and other congressional committees that have conducted hearings on aspects of the stockpile program. S. 290 would alleviate much of the Mining Congress' concern, and we support its enactment with one or two changes.

Our concern has centered on the frequent and often drastic revisions in stockpile objectives established by the Executive Branch of the federal government. In a hearing before the Joint Committee on Defense Production in November, 1976, the American Mining Congress submitted a tabulation of changes in the stockpile objectives for the principal metals and minerals over the entire life of the national

and supplemental stockpiles. There have been no changes in objectives since that date. This tabulation is still valid and we submit it to you once again and ask that it be included in the hearing record.¹

A period of intensive acquisition of material for the stockpile occurred between the end of World War II and 1960. Acquisitions since that time have been relatively minor. At the end of 1963, the value of materials held in the stockpile was approximately \$8 billion, and today the value is about the same.

Since then, with the federal government frequently incurring large budget deficits, various administrations have turned portions of these inventories into cash.

Under the terms of the 1946 stockpile legislation, absent a national emergency, sales could be made only of materials declared surplus to security needs. Between 1963 and 1973, stockpile objectives were reduced. The reductions in objectives have been most pronounced for those metals and minerals that were most readily salable.

Thus, all the copper, nickel and aluminum in the stockpile have been sold as well as most of the lead, zinc and silver. Almost half the tin on hand in 1963 has been sold and there are plans to sell still more.

Following President Nixon's declaration that the national security would be adequately met with stockpiles equivalent to one year's military requirements, members of Congress raised questions as to the adequacy of such limited objectives. As a result of Congressional reluctance to authorize further disposals, the Ford Administration undertook a new stockpile study. The general objectives were restated in terms of a three-year emergency, including consideration of the needs of the civilian population as well as security needs. Subsequently, the Carter Administration reaffirmed its agreement with the general principles of the Ford Administration's program.

The history of changing stockpile objectives has been so erratic that we believe that congressional guidelines for changing the objectives and greater congressional control over the stockpile program are highly desirable.

S. 290 would go a long way toward preventing the use of the stockpiles for economic, budgetary or political purposes. From an administrative point of view, there is certainly much to be gained by consolidating previous stockpile legislation in a single comprehensive act and eliminating the separate stockpile categories that now exist.

The bill clearly states that the purpose of the stockpile is to serve the interest of national defense only and that it is not to be used for economic or budgetary purposes. We fully concur with this statement.

The bill requires that the stockpile should contain quantities sufficient to sustain the nation during a national emergency of up to three years. This represents a major step forward. If political or military conditions should change so that a longer or shorter period appears appropriate, any future administration could reasonably be expected to explain why a different emergency was anticipated. Amendment of the Act could then be considered by Congress.

We also strongly support the requirement, as provided in Section 3(c), that there be no revision of the stockpile objectives without prior notification to the Congress. A great many assumptions go into the establishment of stockpile goals. Sometimes the assumptions have been right, sometimes wrong. The Congress certainly should have advance opportunity to examine the assumptions underlying changes in the goals.

The provisions of Section 5 clearly underscore the continued authority of the Congress both over acquisitions and disposals of stockpile materials. The mining industry believes that this is essential to avoid serious disruptions in the market place. Without such congressional control the stockpile becomes a sword hanging over the heads of both consumers and producers.

S. 290 contains appropriate provisions for stockpile management in Section 6. The provision calling for barter in Section 6(c)(1), however, might be interpreted later as not requiring the competitive procedures otherwise called for in Section 6(b). We suggest some clarifying language on this point and also to make clear that in barter transactions, as in any other, undue disruption of usual markets should be avoided.

Section 8 provides for materials development and research and minerals exploration by the federal government. Similar provisions are found in the current statute.

¹ See table at end of prepared statement.

We recommend that Section 8 be dropped from the bill. First, the authority which it would continue to confer upon the President seems to be duplicative in large measure of authority which the U.S. Bureau of Mines, Geological Survey and Bureau of Land Management already have. Perhaps that is one reason why, to the best of our knowledge, no use has been made of the existing authority in the Stock Piling Act.

Second, the provisions in the current statute and in S. 290 do appear to authorize and encourage government exploration for minerals. While we have no objection to the Bureau of Mines carrying out research, in fact we often cooperate with the Bureau, we strongly believe that minerals exploration is best left to private enterprise.

Exploration is but one of three closely related activities, the others being, first, the delineation of ore bodies and, second, the mining of them. In our view, the private sector is in a better position than the federal government to make the commercial judgments that all of these activities entail. I might also note that the Mining and Minerals Policy Act of 1970 declares that it is the policy of the federal government to encourage private enterprise in developing mineral resources.

The establishment of a National Defense Stockpile Transaction Fund, provided for in Section 9, is certainly a good idea, however we suggest that the provision allowing monies in the Transaction Fund to revert to the Treasury after three years be deleted and that the monies remain in the Fund until expended. This will remove the incentive to sell stockpile materials for budgetary reasons.

We would like to express our appreciation for the careful thought given to this bill by you, Mr. Chairman, your Committee, and the staff. There is substantial room for improvement in management of the defense stockpile. S. 290 is a big step in the right direction.

Thank you, Mr. Chairman, for giving us this opportunity to present our views.

STOCKPILE OBJECTIVES FOR SELECTED MINERALS OVER THE ENTIRE LIFE OF THE NATIONAL AND SUPPLEMENTAL STRATEGIC STOCKPILES

Commodity (unit): Date of objective	Amount	Commodity (unit): Date of objective	Amount
Alumina (short tons): Oct. 1, 1976.....	11,532,000	Chromite:	
Aluminum (short tons):		Chemical (short tons): Oct. 1, 1976.....	734,000
Nov. 17, 1949.....	250,000	Metallurgical, ore (short dry tons):	
Nov. 2, 1950.....	700,000	Nov. 20, 1944.....	2,352,000
July 17, 1952.....	2,000,000	Dec. 2, 1949.....	3,584,000
Aug. 3, 1954.....	2,500,000	Dec. 18, 1952.....	3,360,000
Nov. 1, 1955.....	2,000,000	Sept. 29, 1954.....	6,160,000
Nov. 8, 1956.....	2,000,000	June 30, 1958.....	3,416,000
June 30, 1958.....	290,000	Dec. 11, 1959.....	2,700,000
Nov. 4, 1959.....	1,200,000	July 18, 1963.....	2,970,000
June 17, 1963.....	450,000	Mar. 27, 1964.....	12,970,000
Dec. 20, 1972.....	0	May 13, 1969.....	3,650,000
Apr. 12, 1973.....	0	Mar. 4, 1970.....	3,100,000
Oct. 1, 1976.....	0	June 9, 1971.....	3,086,800
Bauxite (long dry tons):		Jan. 16, 1973.....	2,910,550
Metal grade:		Apr. 12, 1973.....	444,710
Jamaica type:		Oct. 1, 1976.....	2,550,000
Aug. 3, 1954.....	2,800,000	Refractory (short tons, gross weight):	
Sept. 29, 1954.....	2,900,000	Oct. 1, 1976.....	642,000
June 30, 1958.....	2,300,000	Chromium (short tons):	
Nov. 4, 1959.....	2,600,000	Ferro high carbon: Prior to 1973, the	
Apr. 10, 1964.....	5,000,000	objective was part of the objective	
Apr. 12, 1973.....	4,638,000	for metallurgical chromite:	
Oct. 1, 1976.....	523,000	Jan. 16, 1973.....	70,500
Surinam type:		Apr. 12, 1973.....	11,476
Nov. 20, 1944.....	4,400,000	Oct. 1, 1976.....	236,000
Apr. 6, 1950.....	3,250,000	Ferro low carbon: Prior to 1973, the	
Oct. 26, 1950.....	3,900,000	objective was part of the objective for	
July 26, 1951.....	5,000,000	metallurgical chromite:	
Aug. 3, 1954.....	5,000,000	Jan. 16, 1973.....	70,500
Sept. 29, 1954.....	12,500,000	Apr. 12, 1973.....	11,476
June 30, 1958.....	7,300,000	Oct. 1, 1976.....	124,000
Nov. 4, 1959.....	6,400,000	Ferro, silicon: Oct. 1, 1976.....	69,000
Apr. 10, 1964.....	5,300,000	Metal: Oct. 1, 1976.....	10,000
Apr. 12, 1973.....	0	Copper (short tons):	
Oct. 1, 1976.....	0	Nov. 20, 1944.....	1,250,000
Refractory grade:		June 22, 1950.....	1,250,000
Oct. 26, 1950.....	378,000	Oct. 26, 1950.....	2,100,000
Dec. 28, 1950.....	306,000	Sept. 5, 1952.....	1,100,000
July 26, 1951.....	300,000	Aug. 31, 1954.....	1,600,000
Sept. 28, 1954.....	300,000	Sept. 28, 1954.....	3,500,000
June 30, 1958.....	85,000	June 30, 1958.....	1,900,000
Nov. 4, 1959.....	137,000	Mar. 18, 1959.....	1,000,000
Apr. 10, 1964.....	173,000	June 17, 1963.....	775,000
Apr. 12, 1973.....	0	Mar. 13, 1964.....	775,000
Oct. 1, 1976.....	2,083,000	Apr. 12, 1973.....	0

**STOCKPILE OBJECTIVES FOR SELECTED MINERALS OVER THE ENTIRE LIFE OF THE NATIONAL AND SUPPLEMENTAL
STRATEGIC STOCKPILES—Continued**

Commodity (unit): Date of objective	Amount	Commodity (unit): Date of objective	Amount
Oct. 1, 1976	1,299,000	Aug. 31, 1954	8,848,000
Lead (short tons):		June 30, 1958	5,376,000
Nov. 20, 1944	1,100,000	Oct. 16, 1959	6,800,000
June 1, 1950	515,000	Feb. 13, 1964	7,900,000
Nov. 9, 1950	700,000	Mar. 13, 1964	7,900,000
Feb. 24, 1953	700,000	May 1, 1964	7,900,000
Sept. 28, 1954	1,130,000	May 13, 1969	4,000,000
Oct. 26, 1954	1,130,000	Apr. 12, 1973	750,500
Nov. 8, 1956	1,154,000	Metallurgical (short tons): Oct. 1, 1976	2,052,000
May 3, 1957	1,154,000	Ferro silicon (short tons):	
June 30, 1958	286,000	Jan. 16, 1973	45,500
June 17, 1963	0	Apr. 12, 1973	15,900
Dec. 3, 1969	530,000	Oct. 1, 1976	81,000
Apr. 12, 1973	65,100	Nickel (short tons):	
Oct. 1, 1976	865,000	Nov. 20, 1944	118,000
Manganese:		July 27, 1950	274,000
Battery grade, natural ore (short dry tons):		Nov. 9, 1950	290,000
Nov. 20, 1944	168,000	Oct. 9, 1952	450,000
Feb. 1, 1951	257,600	Sept. 28, 1954	450,000
July 12, 1951	203,840	Feb. 8, 1955	337,500
Nov. 8, 1951	190,400	June 30, 1958	161,500
Sept. 28, 1954	375,917	July 18, 1963	50,000
Oct. 26, 1954	144,480	Jan. 13, 1967	20,000
June 30, 1958	82,320	Mar. 13, 1969	55,000
July 1, 1959	50,000	Feb. 9, 1971	0
Feb. 3, 1964	60,000	Apr. 12, 1973	0
Mar. 13, 1964	80,000	Oct. 1, 1976	204,335
May 13, 1969	135,000	Platinum group (troy ounces):	
Apr. 12, 1973	10,700	Iridium:	
Oct. 1, 1976	12,736	Nov. 20, 1944	5,000
Battery grade, synthetic dioxide (short dry tons):		July 20, 1951	13,000
Oct. 26, 1954	29,102	Sept. 28, 1954	13,000
June 30, 1958	12,768	May 16, 1956	4,500
July 1, 1959	20,000	Nov. 8, 1956	4,500
Mar. 13, 1964	6,700	June 30, 1958	1,500
Mar. 27, 1969	1,900	Feb. 16, 1960	4,000
Apr. 12, 1973	0	Apr. 2, 1964	17,000
Oct. 1, 1976	19,015	Apr. 12, 1973	1,800
Chemical grade, type A (short dry tons):		Oct. 1, 1976	97,761
Jan. 26, 1950	17,248	Palladium:	
Oct. 26, 1950	57,120	May 16, 1956	475,000
July 12, 1951	30,240	June 30, 1958	330,000
June 19, 1952	25,760	Feb. 16, 1960	340,000
Sept. 28, 1954	63,314	Apr. 2, 1964	1,300,000
Jan. 18, 1955	47,040	Jan. 9, 1973	510,000
June 30, 1958	28,000	Apr. 12, 1973	328,500
July 1, 1959	30,000	Oct. 1, 1976	2,450,000
Apr. 2, 1964	68,500	Platinum:	
May 13, 1969	35,000	Nov. 20, 1944	275,000
Apr. 12, 1973	12,800	Nov. 2, 1950	590,000
Oct. 1, 1976	*247,136	Aug. 2, 1951	790,000
Chemical grade, type B (short dry tons):		Sept. 28, 1954	879,750
June 19, 1952	15,680	May 16, 1956	235,000
Jan. 18, 1955	40,320	Nov. 8, 1956	235,000
June 30, 1958	24,640	June 30, 1958	154,000
July 1, 1959	53,000	Feb. 16, 1960	165,000
Apr. 2, 1964	64,000	Apr. 2, 1964	450,000
May 13, 1969	35,000	Jan. 5, 1967	335,000
Apr. 12, 1973	12,800	May 13, 1969	555,000
Oct. 1, 1976	*247,136	Apr. 12, 1973	187,500
Electrolytic metal (short tons):		Oct. 1, 1976	1,314,000
Jan. 16, 1973	9,000	Silver (troy ounces):	
Apr. 12, 1973	4,750	June 3, 1965	165,000,000
Oct. 1, 1976	15,000	Mar. 4, 1970	139,500,000
Ferro high carbon (short tons):		Apr. 12, 1973	21,663,000
Jan. 16, 1973	600,000	Oct. 1, 1976	0
Apr. 12, 1973	200,000	Tin (long tons):	
Oct. 1, 1976	439,000	Nov. 20, 1944	210,000
Ferro low carbon: Oct. 1, 1976	0	Dec. 2, 1949	260,000
Ferro medium carbon (short tons):		Jan. 26, 1950	285,000
Jan. 16, 1973	36,000	Nov. 30, 1950	350,000
Apr. 12, 1973	10,500	June 28, 1951	245,000
Oct. 1, 1976	99,000	Sept. 28, 1954	308,000
Metallurgical (short dry tons):		Mar. 22, 1955	341,000
Nov. 20, 1944	5,264,000	June 30, 1958	198,000
Dec. 2, 1949	5,600,000	July 7, 1960	185,000
July 12, 1951	5,600,000	May 20, 1963	200,000
Oct. 11, 1951	5,600,000	July 26, 1963	200,000
July 17, 1952	5,600,000	Mar. 27, 1969	232,000
		Apr. 12, 1973	40,500
		Oct. 1, 1976	32,499

See footnotes at end of table.

STOCKPILE OBJECTIVES FOR SELECTED MINERALS OVER THE ENTIRE LIFE OF THE NATIONAL AND SUPPLEMENTAL STRATEGIC STOCKPILES—Continued

Commodity (unit): Date of objective	Amount	Commodity (unit): Date of objective	Amount
Tungsten (pounds):		Zinc (short tons):	
Ores and concentrates:		Nov. 20, 1944.....	1,500,000
Nov. 20, 1944.....	36,000,000	July 6, 1950.....	1,500,000
Feb. 18, 1949.....	85,000,000	Dec. 7, 1950.....	1,500,000
July 20, 1950.....	114,000,000	Jan. 4, 1951.....	780,000
Nov. 30, 1950.....	146,000,000	July 12, 1951.....	740,000
Jan. 7, 1953.....	140,000,000	Oct. 16, 1952.....	740,000
Sept. 29, 1954.....	94,000,000	Apr. 30, 1953.....	740,000
June 30, 1958.....	49,200,000	Aug. 3, 1954.....	1,100,000
Nov. 4, 1959.....	50,000,000	Nov. 8, 1955.....	1,250,000
Apr. 2, 1964.....	44,000,000	May 3, 1957.....	1,250,000
Mar. 4, 1970.....	60,000,000	Mar. 20, 1958.....	1,256,000
Apr. 12, 1973.....	4,234,000	June 30, 1958.....	178,000
Oct. 1, 1976.....	8,823,000	June 17, 1963.....	0
Carbide powder: Oct. 1, 1976.....	12,845,000	Dec. 3, 1969.....	560,000
Ferro: Oct. 1, 1976.....	17,769,900	Apr. 12, 1973.....	202,700
Metal powder: Oct. 1, 1976.....	3,290,000	June 15, 1976.....	374,830
		Oct. 1, 1976.....	1,313,000

¹ Amended.

² Combined total, type A and B.

I would emphasize once again that the record will remain open for those who want to present additional views.

With that, we will thank our witnesses for their appearance here this morning and their cooperation, and the hearing will be adjourned. [Whereupon, at 11:26 a.m., the hearing was adjourned.]

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